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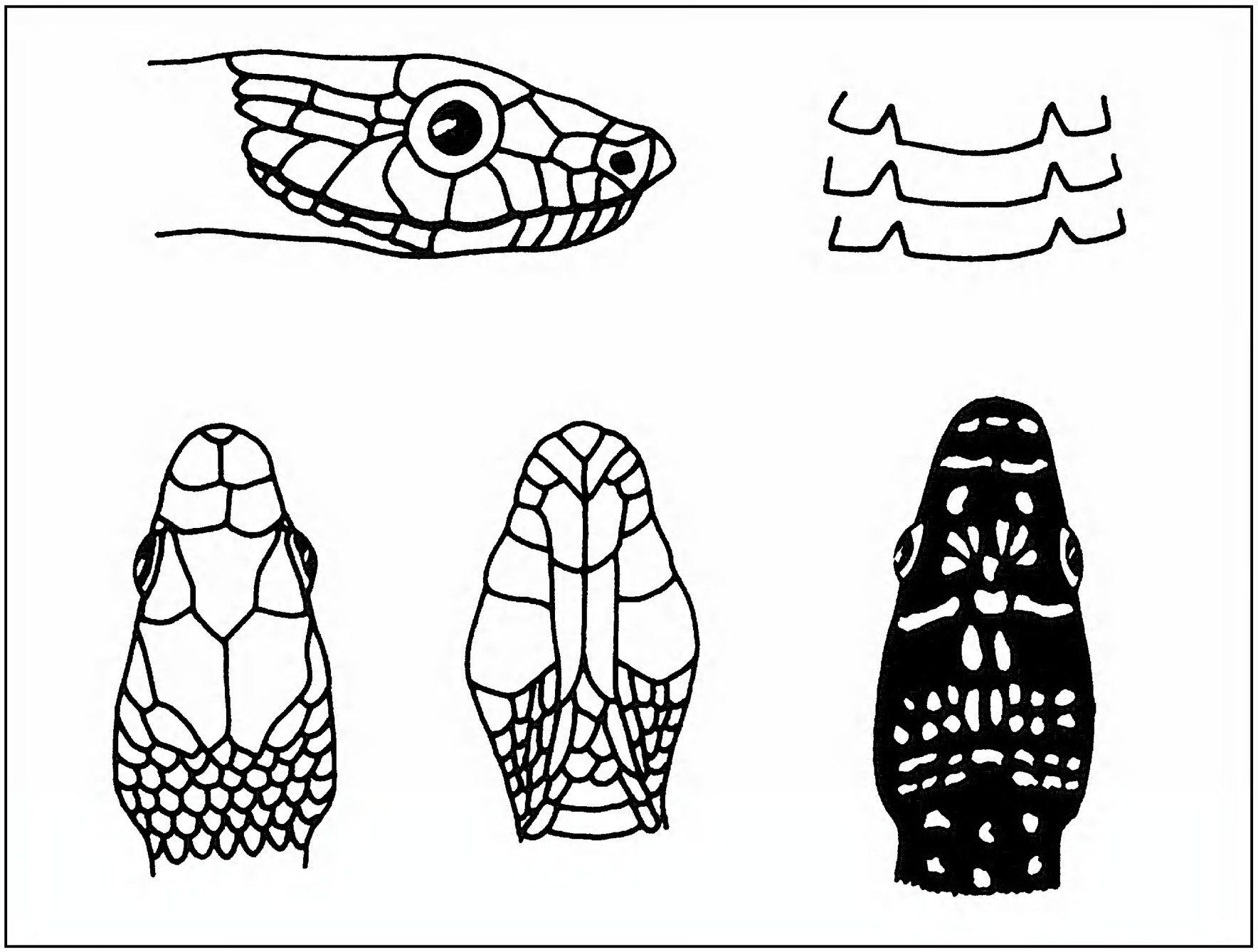

BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY
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Crotalus molossus in the El Pinacate Region, Sonora, Mexico

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On 4 April 2000, I came into the El Pinacate region of northwestern Sonora, Mexico, around 1330 h. Most of the plants were green and many in flower with some wildflowers present. Daytime high temperature was 93°F, bright sunshine, blue skies. Along Mexican Highway 2, *Sauromalus obsesus* is commonly seen basking openly on dark lava boulders, while *Uta stansburiana* are seen on smaller rocks. Upon the open desert sands, very young juvenile and adult *Dipsosaurus dorsalis* are seen commonly along with *Callisaurus draconoides* and the *Cnemidophorus tigris* always moving from one creosote bush to another.

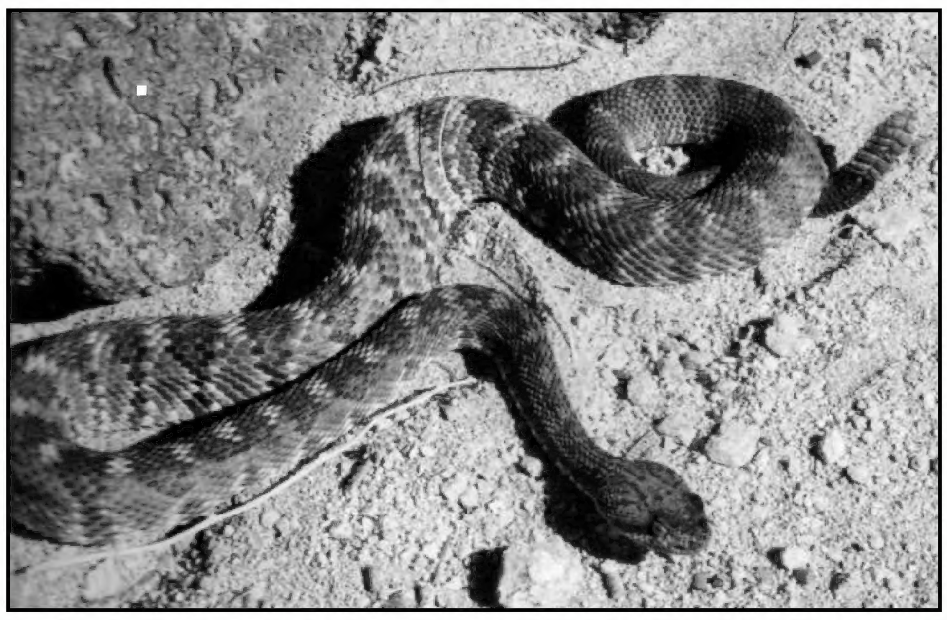
At night, *Crotalus cerastes* were found commonly on the sandy road from the highway to El Elegante. Numerous *Coleonyx variegatus*, one *Hypsiglena torquata* and one *Phrynosoma platyrhinos* that ran off the road into the side desert, were observed.

While walking with flashlight and headlight at the base of a large lava flow area just northeast of El Elegante (within 500 yards), besides seeing numerous *Coleonyx variegatus*, one juvenile *Crotalus molossus* was found at 22:25 hours.

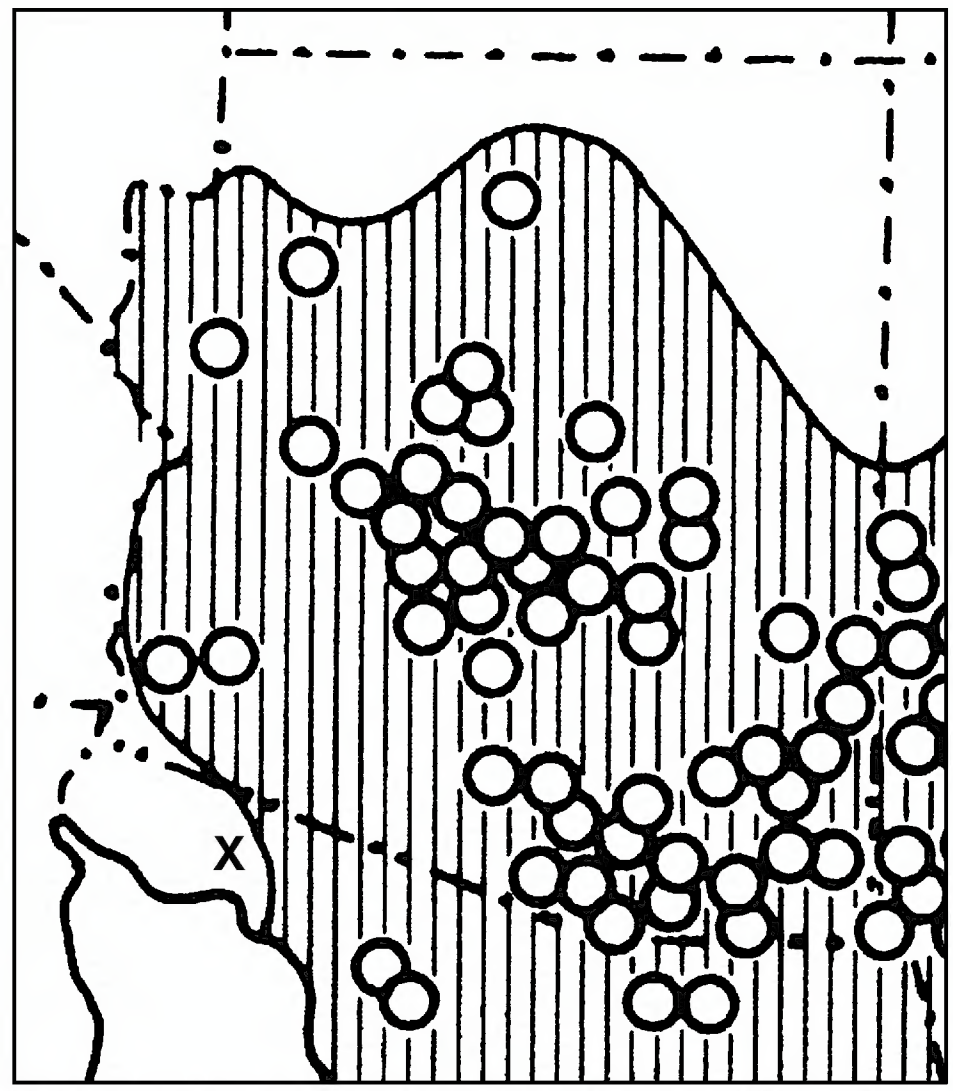
The *Crotalus molossus* was very much a surprise for no one has reported it there, making it the farthest west location in Sonora. In their inventory of the region, Gonzalez-Romero and Alvarez-Cardenas (1989) made no mention of *C. molossus* having been found, nor did they postulate its presence there.

On his range map Price (1980) shows that this snake doesn't occur in the most northwestern part of Sonora, with his solid line well east of the Pinacate region.

These observations and photographs were taken while camping in the Biosphere Reserve and at no time were animals captured, teased, molested or removed. This is a magnificent area of old craters and lava flows surrounded by the vast Gran Desierto sand dunes of the Lower Colorado River Valley in the Sonoran Desert.



Northern black-tailed rattlesnake, *Crotalus molossus molossus*, from the Pinacate Biosphere Reserve, Sonora, Mexico.



Distribution of *Crotalus molossus molossus* in Arizona, USA, and northern Sonora, Mexico [map from Price (1980)]. Vertical bars indicate the presumed range; open circles indicate records. The **X** shows the location of the El Pinacate specimen.

Literature Cited

Gonzalez-Romero, A., and S. Alvareza-Cardenas. 1989. Herpetofauna de la region del Pinacate, Sonora, Mexico: Un inventario. Southwestern Naturalist 34(4):519-526.

Price, A. H. 1980. *Crotalus molossus*. Catalogue of American Amphibians and Reptiles 242.1

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A Checklist and Key to the Amphibia of Pakistan

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Abstract

Keys to and checklists of the amphibians of Pakistan are presented with notes on their distribution, including keys for identification of the tadpoles of Pakistan.

Introduction

G. A. Boulenger's volume (1890) in the *Fauna of British India* series, forms the basis of our knowledge about the Amphibia of subcontinent. After partition of the subcontinent, S. A. Minton published his observations (1962, 1966), ushering in the modern era in herpetological studies in Pakistan. He was soon followed by Mertens (1969, 1971, 1974). Since then, extensive taxonomic work has been carried out in different parts of Pakistan resulting in descriptions and records of several new species of frogs and toads (Dubois and Khan, 1979; Baig and Gvozdik, 1998; Stöck et al., 1999; Khan, 1968b, 1972, 1974, 1976, 1979, 1980, 1985, 1986, 1987, 1990, 1991b, 1997a,b, 1999b, 2000, 2001a; Khan and Ahmed, 1987; Khan and Baig, 1988; Khan and Tasnim, 1987, 1989; Mertens, 1971). The number of species has steadily risen over the years: Minton (1966) recorded 7 species; Mertens (1969) 14; Khan (1980) 18; and the present report encompasses 24 species.

Amphibians in Pakistan belong to three families: Bufonidae, Microhylidae and Ranidae. Amphibian eggs and tadpoles form an important component of the wetland ecosystem, providing food to the aquatic insects, birds and snakes.

This checklist encompasses all species of amphibians known from Pakistan. The taxonomic categories are alphabetically arranged with no phylogenetic significance. Another important feature of the checklist is that the scientific names of species are followed by their common names in English and Urdu, to help familiarize the taxa to the general public and to facilitate exchange of information. A key for identification of tadpoles is also provided.

Key to Amphibian Families in Pakistan

1. Parotid gland present ----------Bufonidae
   No parotid gland ----------2
2. Pupil vertical ---------- Microhylidae
   Pupil horizontal ----------Ranidae

Family Bufonidae

Genus ***Bufo*** Laurenti, 1768

Represented by 10 species and subspecies in Pakistan.

Key to Toads of the Genus *Bufo* in Pakistan

1. Head with cranial crests ----------2
   Head without cranial crests ----------3
2. Only supraorbital crest present; tympanum indistinct ---
   ----------*Bufo himalayanus*
   Canthal, supraorbital, postorbital and orbitotympanic crests present, tympanum distinct ---------*Bufo melanostictus*
3. Tympanum distinct ----------4
   Tympanum indistinct ----------*Bufo surdus*
4. Tibial gland absent ----------5
   Tibial gland present ----------6
5. Dorsum with green pattern ----------7
   Dorsum uniformly olive ---------- *Bufo olivaceus*
6. Tarsal fold indicated by a weak spinulated line ---
   ---------- *Bufo stomaticus*
   A distinct tarsal fold present ---------- *Bufo latastii*
7. Dorsal pattern of scattered green spots ----------*Bufo viridis*
   Dorsal pattern of coalesced green blotches ---------- 8
8. Dorsal pattern of longitudinal stripes, three on each side ---
   ----------*Bufo siachinensis*
   Dorsum heavily green with occasional light spots of original body color ----------*Bufo pseudoraddei*

Bufo himalayanus Günther
(Himalayan toad: *Hamalayai gauk*)

1864 *Bufo melanostictus* var. *himalayanus* Günther, Rept. Brit. India:422.

Type locality: Sikkim and Nepal.

Distribution: Recorded from the Himalayas at 2000–3500 m. From Azad Kashmir, Hazara Division, North Western Frontier Province. Also reported from the southern slopes of the Himalayas in Tibet (China), northwestern Yunnan (China), Nepal, and Sikkim.

Bufo latastii Boulenger
(Ladakh toad: *Ladakhi gauk*)

1882 *Bufo latastii* Boulenger, Cat. Batr. Sal.:294.

Type locality: Ladakh, northeastern, Pakistan.

Distribution: In Pakistan this toad has been recorded from Ladakh in Baltistan between 2600 and 3000 m of elevation. Extends in Kashmir, Nepal, north Indian Punjab.

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Bufo melanostictus Schneider

(Southeast Asian toad: *Mashriqi gauk*)

1799 *Bufo melanostictus* Schneider, Hist. Amph., 1:216.

Type locality: India.

Distribution: Widely distributed in northeastern parts of Pakistan (Rawalpindi, Islamabad, Azad Kashmir and North Western Frontier Province). Pakistani population has recently been described as a new subspecies. One of the most common and widely distributed toads in Southeast Asia. Its range includes southwestern and southern China (including Taiwan) from Nepal to Sri Lanka, Andaman Islands, and Sumatra, Java, Borneo, and Bali. Extends throughout northern and peninsular India.

Bufo melanostictus hazarensis Khan

(Hazara toad: *Hazara gauk*)

2001 *Bufo melanostictus hazarensis* Khan, Pakistan J. Zool. 33:297.

Type locality: Ooghi, Manshera, and Datta, Hazara Division, NWFP, Pakistan.

Distribution: Restricted to the alpine Punjab, District Hazara, eastern NWFP, and Azad Kashmir.

Bufo olivaceus Blanford

(Olive toad: *Zatooni gauk*)

1874 *Bufo olivaceus* Blanford, Ann. Mag. Nat. Hist., London (4)14:35.

Type locality: Dasht, Balochistan.

Distribution: Recorded from the extreme western parts of Balochistan. Recorded from southeastern Iran.

Bufo pseudoraddei pseudoraddei (Mertens)

(Swat green toad: *Swati gauk*)

1971 *Bufo viridis pseudoraddei* Mertens, Senckenb. Biol. 52(1-2):7-15.

1999 *Bufo pseudoraddei pseudoraddei* Stöck, Schmid, Steinlein, Grosse, Ital. J. Zool. 66:221-226

Type locality: Mingora, Swat, Pakistan.

Distribution: Known from Mingora, Swat, Pakistan.

Bufo pseudoraddei baturae Stöck et al.

(Batura glacier toad: *Batura gauk*)

1999 *Bufo pseudoraddei baturae* Stöck, Schmid, Steinlein, Grosse, Ital. J. Zool. 66:221-226.

Type locality: Hunza River, north of Passu River, Gilgit Agency, Baltistan, northeastern Pakistan.

Distribution: Passu, Swat, Karakoram Range, Gilgit Agency, Baltistan, Pakistan.

Bufo siachinensis Khan

(Siachine toad: *Siachin gauk*)

1997 *Bufo siachinensis* Khan, Pakistan J. Zool. 29(1):43-48.

Type locality: Shinu village, on the left bank of the River Shyok, 140 km east of Skardu, at the foot of Siachen Glacier, Baltistan, northeastern Pakistan.

Distribution: As yet known only from the type locality.

Taxonomic notes: Stöck et al. (1999) have placed this taxon in the synonomy of *B. latastii*.

Bufo stomaticus Lütkin

(Indus valley toad: *Maidani gauk*)

1863 *Bufo stomaticus* Lütkin, Vidensk. Meddel. Naturhist. Foren, Kjobenhavn 14:305.

Type locality: Assam, western Himalayas, India.

Distribution: Widely distributed throughout the Indo-Pakistan subcontinent. Has been collected from upper and lower Indus Valleys, Balochistan, from plains to an elevation of 1800 m in the northern and western hilly tracts of Pakistan. Extends from Bangladesh through the Ganges Plain, peninsular India, Afghanistan, Iran, and Muscat.

Bufo surdus Boulenger

(Iranian toad: *Irani gauk*)

1891 *Bufo surdus* Boulenger, Ann. Mag. Nat. Hist. London, (6)7:282.

Type locality: Balochistan, Pakistan.

Distribution: A little known species. Reported from western Balochistan and around Quetta. Widely distributed in southern Iran and adjacent Iraq.

Bufo viridis zugmayeri Eiselt and Schmidtler

(Baloch green toad: *Baloch gauk*)

1973 *Bufo viridis zugmayeri* Eiselt and Schmidtler, Ann. Naturhist. Mus. Wien. 77:206-207.

Type locality: Peshin, southeastern Balochistan, Pakistan.

Distribution: Quetta, Chagai, Balochistan, Pakistan.

Family Microhylidae

The family Microhylidae is represented in Pakistan by two genera, *Microhyla* and *Uperodon*, each with a single species.

Key to Frogs of the Family Microhylidae in Pakistan

1. Tongue elliptical; a dermal ridge between internal nares; adult does not exceed 30 mm in body length; body dorsum with elongated light brown large branched blotch --- ----------*Microhyla ornata*

   Tongue oval; a pair of tubercles between internal nares; adult size 50–60 mm; dorsum with brown reticulation --- ----------*Uperodon systoma*

Genus ***Microhyla*** Tschudi, 1828

Microhyla ornata (Duméril and Bibron)

(Ant frog: *Bauna maindak*)

1841 *Engystoma ornatum* Duméril and Bibron, Erpet. Gén., 8:745.

1882 *Microhyla ornata* Boulenger, Cat. Batr. Sal. Brit. Mus.: 165.

Type locality: Malabar Coast, India.

Distribution: Widely distributed in Azad Kashmir, and Indus Valley in Pakistan. Extends widely in southeast Asia: from the Malay Peninsula, Siam, southern China, Cambodia, Burma, Nepal, Kashmir, Sri Lanka, and throughout India.

Genus ***Uperodon*** Duméril and Bibron, 1841

Uperodon systoma (Schneider)

(Marbled balloon frog: *Marmareen maindak*)

1799 *Rana systoma* Schneider, Hist. Amphib., 1:144.

1931 *Uperodon systoma* Parker, Arch. Zool. Ital. 16:1243.

Type locality: Carnatic, Biligiriranga Hills, Mysore, Madras, India.

Distribution: Rare frog in Pakistan, collected from the foot of Shakarparian Hills, Islamabad. Widely distributed in southern and eastern India, extending into northern Sri Lanka.

Family Ranidae

The family Ranidae is represented by six genera and ten species in Pakistan.

Key to Frogs of the Family Ranidae in Pakistan

1. Tympanum indistinct ---------- 2
   Tympanum distinct ----------3

2. Body dorsum with thick, broken longitudinal folds ---
   ----------*Nanorana pleskei*
   Body dorsum smooth with a few tubercles on flanks ---
   ----------*Paa vicina*

3. Toes half webbed ----------4
   Toes extensively webbed ----------6

4. Habitus toad-like, inner metatarsal tubercle shovel-shaped ----------*Tomopterna breviceps*
   Habitus frog-like, inner metatarsal tubercle elongate ------- 5

5. First finger hardly extending beyond second; tibio-tarsal joint reaching to anterior border of eye or a point between eye and tip of snout ---------- *Limnonectes syhadrensis*
   First finger longer than second; tibio-tarsal joint reaching tympanum or naris ---------- *Limnonectes limnocharis*

6. Body dorsum pustulate ----------7
   Body dorsum with longitudinal folds ---
   ----------*Hoplobatrachus tigerinus*

7. Nuptial spines on at least first two fingers ----------8
   No nuptial spines ---------- *Euphlyctis cyanophlyctis*

8. Pustules large, multispinulate; belly spiny ---
   ----------*Paa sternosignata*
   Pustules small, unispinulate; belly spineless ----------9

9. Spinules on longitudinal ridges ----------*Paa hazarensis*
   Spinules on pustules ---------- *Paa barmoachensis*

Genus ***Euphlyctis*** Fitzinger, 1843

Euphlyctis cyanophlyctis cyanophlyctis (Schneider)
(Skittering frog: *Tapakta maindak*)

1799 *Rana cyanophlyctis* Schneider, Hist. Amphib., 1:137.
1985 *Euphlyctis cyanophlyctis* Poynton and Broadley, Ann. Natal Mus. 26:124, by implication.

Type locality: Eastern India.
Distribution: Almost throughout Pakistan, below 1800 m. Most widely distributed Oriental frog. Extends from Thailand to Nepal, throughout India, Sri Lanka. It extends westward to Iran, Afghanistan and Arabia. Two races have been described from Pakistan:

Euphlyctis cyanophlyctis seistanica (Nikolsky)
(Seistan skittering frog: *Sestan tapakta maindak*)

1900 *Rana seistanica* Nikolsky, Ann. Mus. Zool. Acad. Sci. St. Petersburg, iv, 1899:375-418.

Type locality: Seistan.
Distribution: Seistan, along the Pakistan–Afghanistan–Iran and Iran–Afghanistan border.

Euphlyctis cyanophlyctis microspinulata Khan
(Spiny skittering frog: *Khardar tapakta maindak*)

1997 *Euphlyctis cyanophlyctis microspinulata* M. S. Khan, Pakistan J. Zool. 29:107-112.

Type locality: Khuzdar, southeast Kalat Division, Balochistan, Pakistan.
Distribution: Widely distributed in Jhelum, Waziristan, and Balochistan, extends into Afghanistan.

Genus ***Hoplobatrachus*** Peters, 1863

Hoplobatrachus tigerinus (Daudin)
(Bullfrog: *Basanti maindak*)

1802 *Rana tigerina* Daudin, Hist. Nat. Rainettes 1802, Hist. Nat. Rain. Gren. Crap.:42.
1992 *Hoplobatrachus tigerinus* Dubois, Bull. Mens. Soc. Linn, Lyon 61:315.

Type locality: Bengal, India.
Distribution: Common frog of the Indo-Gangetic plains, not extending into Balochistan, however reported from Afghanistan close to the Khyber Pass. Nepal and India; Sri Lanka; introduced in Madagascar.

Genus ***Limnonectes*** Fitzinger, 1843

Limnonectes limnocharis (Gravenhorst)
(Alpine cricket frog: *Paharri tidda maindak*)

1829 *Rana limnocharis* Gravenhorst, Delic. Mus. Zool. Vratislav.:42
1987 *Limnonectes limnocharis* Dubois, 1987 "1986", Alytes, 5:61.

Type locality: Java.
Distribution: Distributed in the sub-Himalayan parts of Pakistan, descending into Potwar Tableland to most of the Punjab plains and some of the lower Indus Valley where it is scarcer. Widely distributed in southeast Asia: China (Taiwan, Sichuan, and south of Chuanche [=Yangtze] River and north to Shandong) to Nepal, India, Sri Lanka, southern Japan, Philippines, Greater Sunda Is., and the Lesser Sundas as far east as Flores.

Limnonectes syhadrensis (Annandale)
(Southern cricket frog: *Dakhni tidda maindak*)

1919 *Rana syhadrensis* Annandale, Rec. Ind. Mus. Calcutta, 16:123.
1987 *Limnonectes syhadrensis* Dubois, 1987 "1986", Alytes, 5:61.

Type locality: Bombay Presidency, between 300 and 500 m in southern India.
Distribution: In most of its range in Pakistan it is sympatric with *Limnonectes limnocharis*, which becomes scarcer in the lower Indus Valley where *Limnonectes syhadrensis* is dominant. However, it is widely distributed throughout southern India.

Genus ***Nanorana*** Günther, 1836

Nanorana pleskei Günther
(Tibetan frog: *Tibti maindak*)

1896 *Nanorana pleskei* Günther, Annu. Mus. Zool. Acad. Impér. Sci. St.-Petersbourg, 1:207.

Type locality: Sungpan and Inkuan, Kham Mountains, Szechwan, China.

Distribution: Collected from the Himalayas between 3000 and 3500 m; ranges from Azad Kashmir. Extends to northwestern Yunnan, western Sichuan, and southeastern Gansu, China.

Genus ***Paa*** Dubois, 1975

Paa barmoachensis (Khan and Tasnim)
(Kashmir torrent frog: *Kashmir nadi maindak*)

1989 *Rana barmoachensis* Khan and Tasnim, J. Herpetology, 23(4):419-423.

Type locality: Barmoach, Goi Madan, Azad Kashmir.

Distribution: Collected from Aram Bari, Tatta Pani, Charnali, and Kotli, all in District Kotli, Azad Kashmir.

Paa hazarensis (Dubois and Khan)
(Hazara torrent frog: *Hazara nadi maindak*)

1979 *Rana hazarensis* Dubois and Khan, J. Herpetology, 13(4):403-410.

1992 *Paa hazarensis* Dubois, Bull. Mens. Soc. Linn. Lyon, 61:320.

Type locality: Datta, District Manshera, Pakistan.

Distribution: Known from Hazara Division, NWFP, Pakistan.

Paa sternosignata (Murray)
(Karez frog: *Karez maindak*)

1885 *Rana sternosignata* Murray, Ann. Mag. Nat. Hist., London (5)16:120.

1992 *Paa sternosignata* Dubois, Bull. Mens. Soc. Linn. Lyon, 61:319.

Type locality: Karachi and Quetta, Balochistan, Pakistan.

Distribution: Collected from Quetta and Mastung, Balochistan. Reported from Afghanistan between 1800 and 2000 m.

Paa vicina (Stoliczka)
(Murree frog: *Maree maindak*)

1872 *Rana vicina* Stoliczka, Proc. Asiatic Soc. Bengal, Calcutta 1872:124-131.

1992 *Paa vicina* Dubois, Bull. Mens. Soc. Linn. Lyon 61: 320.

Type locality: Murree, alpine Punjab, Pakistan.

Distribution: Murree, alpine Punjab, Pakistan and bordering Azad Kashmir.

Genus ***Tomopterna*** Duméril and Bibron, 1841

Tomopterna breviceps Schneider
(Burrowing frog: *Gauk-maindak*)

1799 *Rana breviceps* Schneider, Hist. Amphib. I:140.

1938 *Tomopterna breviceps* Deckert, Sitzungsber. Ges. Naturf. Freunde Berlin, 1938:142.

Type locality: India.

Distribution: Widely distributed in the sub-Himalayan hill tracts and Salt Range, descending into Punjab and lower Sindh. Throughout India, Bangladesh, Nepal, Burma and Sri Lanka.

Amphibian Tadpoles of Pakistan

Tadpoles are important primary consumers in the wetlands and hilly streams and torrents. Several studies have been carried out on tadpoles in Pakistani waters (Khan, 1965, 1968a, 1969, 1982a,b, 1991a, 1996a,b, 1999a, 2000, 2001b; Khan and Malik, 1987; Khan and Mufti, 1994a,b, 1995).

For various morphological terms used in description of tadpole morphology consult Khan and Mufti (1994a).

Key for Identification of Tadpoles in Pakistan

1. Body transparent; eyes lateral ----------2
   Body not transparent, dull; eyes dorsolateral ---------- 3

2. Tail flagellum long; head broader than body ---
   ----------*Microhyla ornata*
   Tail flagellum short; head and body equally broad ---
   ----------*Uperodon systoma*

3. Labial tooth row formula typically 2(2)/3; total size not exceeding 20 mm ----------genus *Bufo*
   Labial tooth row formula very variable; total size exceeds 25 mm ----------4

4. Labial tooth row formula 1/2 -------*Euphlyctis cyanophlyctis*
   Anterior labium with more than two dental rows ----------5

5. Labial tooth row formula 2(2)/3 ----------6
   Tooth rows on anterior labium more than three ---------- 7

6. Lateral labial papillae continuous round the posterior labium ----------*Tomopterna breviceps*
   Oral papillae confined to lateral sides of the oral disc ---
   ----------genus *Limnonectes*

7. Labial tooth row formula 5(4)/(3)5 ---
   ----------*Hoplobatrachus tigerinus*
   Labial tooth row formula 8(6)/(3)2 ---------- genus *Paa*

Literature Cited

Baig, K. J., and L. Gvozdik. 1998. *Uperodon systoma* (Schneider): Record of a new microhylid frog from Pakistan. Pakistan J. Zool. 30:155-156.

Boulenger, G. A. 1890. Fauna of British India, including Ceylon and Burma. Reptilia and Batrachia. London.

Dubois, A., and M. S. Khan. 1979. A new species of frog (genus *Rana*, subgenus *Paa*) from northern Pakistan (Amphibia, Anura). J. Herpetology 13:403-410.

Khan, M. S. 1965. A normal table of *Bufo stomaticus*. Biologia (Lahore) 11:1-39.

———. 1968a. Morphogenesis of digestive tract of *Bufo stomaticus*. Pakistan J. Scient. Res. 20:93-106.

———. 1968b. Amphibian fauna of District Jhang with notes on habits. Pakistan J. Sci. 20:227-233.

———. 1969. A normal table of *Rana tigerina* Daudin. 1. Early development (Stages 1-27). Pakistan J. Sci. 21:36-50.

———. 1972. The "commonest toad" of West Pakistan and a note on *Bufo melanostictus* Schneider. Biologia (Lahore) 18:131-133.

———. 1974. Discovery of *Microhyla ornata* (Dumeril & Bibron) from the Punjab, Pakistan. Biologia (Lahore) 20(2):179-180.

———. 1976. An annotated checklist and key to the amphibians of Pakistan. Biologia (Lahore) 22:201-210.

———. 1979. On a collection of amphibians from northern Punjab and Azad Kashmir, with ecological notes. Biologia (Lahore) 25: 37-50.

———. 1980. Affinities and zoogeography of herpetiles of Pakistan. Biologia (Lahore) 26:113-171.

———. 1982a. Key for the identification of amphibian tadpoles from the plains of Pakistan. Pakistan J. Zool. 14:133-145.

———. 1982b. Collection, preservation and identification of amphibian eggs from the plains of Pakistan. Pakistan. J. Zool. 14: 241-243.

———. 1985. An interesting collection of amphibians and reptiles from Cholistan Desert, Punjab, Pakistan. J. Bombay. Nat. Hist. Soc. 82:144-148.

———. 1986. A noteworthy collection of amphibians and reptiles from northwestern Punjab, Pakistan. The Snake 18:118-125.

———. 1987. Checklist, distribution and zoogeographical affinities of herpetofauna of Balochistan. Proc. Pakistan Zool. Congr. 7:105-112.

———. 1990. The impact of human activities on the status and distribution of amphibians in Pakistan. Hamadryad 15:21-24.

———. 1991a. Morphoanatomical specialization of the buccopharyngeal region of the anuran larvae and its bearing on the mode of larval feeding. Ph.D. diss., University of the Punjab, Lahore, Pakistan.

———. 1991b. Amphibians, lizards, turtles and snakes. Chapter 3, Pp. 61-124. *In*: *Pakistan ki Jangli Hayat* (Wildlife of Pakistan). Publication No. 241. Urdu Science Board, 299 Upper Mall, Lahore [in Urdu].

———. 1996a. Oropharyngeal morphology of tadpole of southern cricket frog *Rana syhadrensis* Annandale, 1919, and its ecological correlates. Pakistan J. Zool. 28:133-138.

———. 1996b. The oropharngeal morphology and feeding habits of tadpole of tiger frog *Rana tigerina* Daudin. Russian J. Herpetol. 2:163-171.

———. 1997a. A new toad from the foot of Siachin Glacier, Baltistan, northeastern Pakistan. Pakistan J. Zool. 29(1):43-48.

———. 1997b. A new subspecies of common skittering frog *Euphlyctis cyanophlyctis* (Schneider, 1799) from Balochistan, Pakistan. Pakistan J. Zool. 29(2):107-112.

———. 1999a. Food particle retrieval in amphibian tadpoles. Zoo's Print J. 14:17-20.

———. 1999b. Herpetology of habitat types of Pakistan. Pakistan J. Zool. 31:275-289.

———. 2000. *Sar Zameen-a-Pakistan kay maindak aur Khazinday* (Frogs and lizards of Pakistan). Urdu Science Board, 299 Upper Mall, Lahore, Pakistan.

———. 2001a. Notes on cranial-ridged toads of Pakistan and description of a new subspecies (Amphibia: Bufonidae). Pakistan J. Zool. 33(4):293-298.

———. 2001b. Morphology and feeding ecology of *Microhyla ornata* tadpole. Asiatic Herp. Res. 9:130-138.

Khan, M. S., and N. Ahmed. 1987. On a collection of amphibians and reptiles from Baluchistan, Pakistan. Pakistan J. Zool. 19: 361-370.

Khan, M. S., and K. J. Baig. 1988. Checklist of the amphibians and reptiles of District Jhelum, Punjab, Pakistan. The Snake 20: 156-161.

Khan, M. S., and S. A. Malik. 1987. Buccopharyngeal morphology of tadpole larva of *Rana hazarensis* Dubois and Khan 1979, and its torrenticole adaptations. Biologia (Lahore) 33:45-60.

Khan, M. S., and S. A. Mufti. 1994a. Oral disc morphology of amphibian tadpole and its functional correlates. Pakistan J. Zool. 26: 25-30.

Khan, M. S., and S. A. Mufti. 1994b. Buccopharyngeal specializations of tadpole of *Bufo stomaticus* and its ecological correlates. Pakistan J. Zool. 26:285-292.

Khan, M. S., and S. A. Mufti. 1995. Oropharyngeal morphology of detritivorous tadpole of *Rana cyanophlyctis* Schneider, and its ecological correlates. Pakistan J. Zool. 27:43-49.

Khan, M. S., and R. Tasnim. 1987. A field guide to the identification of herps of Pakistan. Part I, Amphibia. Biological Society of Pakistan, Monograph No. 14:1-28.

Khan, M. S., and R. Tasnim. 1989. A new frog of the genus *Rana*, subgenus *Paa*, from southwestern Azad Kashmir. J. Herpetology 23:419-423.

Mertens, R. 1969. Die Amphibien und Reptilien West-Pakistans. Stuttg. Beitr. Naturk. 197:1-96.

————. 1971. Die Amphibien und Reptilien West-Pakistans. Senckenb. biol. 52(1-2):7-15.

————. 1974. Die Amphibien und Reptilien West-Pakistans. Senckenb. biol. 55(1-3):35-38.

Minton, S. A., Jr. 1962. An annotated key to the amphibians and reptiles of Sind and Las Bela, West Pakistan. American Mus. Novit. 2081:1-21.

————. 1966. A contribution to the herpetology of West Pakistan. Bull. American Mus. Nat. Hist. 134(2):31-184.

Stöck, M., M. Schmid, C. Steinlein and W.-R. Grosse. 1999. Mosaicism in somatic triploid specimens of the *Bufo viridis* complex in the Karakoram with examination of calls, morphology and taxonomic conclusions. Ital. J. Zool. 66:215-232.

Bull. Chicago Herp. Soc. 37(9):163-167, 2002

The 2001 Collection of *Sceloporus* (Reptilia: Sauria) from Chihuahua, Mexico

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Abstract

The 2001 collection of *Sceloporus* from the state of Chihuahua includes 514 specimens here reported, of 18 taxa. Their localities and variation augment current knowledge.

During the summer of 2001 JLE continued his survey of the herpetology of the state of Chihuahua, Mexico, and we here record the *Sceloporus* collected at that time. All specimens are in UBIPRO and were collected in Chihuahua except where noted otherwise.

Sceloporus belli Smith et al. Eighty-one: 6748, 6787-90, Llano El Victorio (29°55′15.9″N, 104°39′58.7″W), 1282 m, 8–9 April; 6814, Ejido Polvorillas, mpio Ojinaga (25°47′36.2″N, 104°13′30.8″W),1440 m, 11 April; 6957, Rancho El Cuervo (30°14′29.5″N, 105°7′45.2″W), 1134 m, 8 June; 7036-7, betw La Cepa and Las Cuatas (30°1′46.4″N, 105°48′9″W), 1324 m, 10 June; 7038-59, Rancho Las Coatas (30°3′7.0″N, 105°54′13.0″W), 1304 m, 10 June; 7061, betw El Pugido and El Huarache (30°6′50.2″N, 106°3′29.0″W), 1434 m, 10 June; 7062-75, fence post in front of Rancho Los Berrendos (30°9′57.2″N, 106°12′47.6″W), 10 June; 7076-8, gate before Rancho Los Berrendos (30°10′25.1″N, 106°19′56.1″W), 1485 m, 10 June; 7079-82, fence post W Rancho Los Berrendos nr Estación Moctezuma (30°11′10.8″N, 106°22′16.9″W), 10 June; 7110-2, 7734, 7753-4, 7784, Llano Ejido Flores Magón, km 9, mpio Buenaventura (29°58′57.8″N, 107°9′8.7″W), 1454 m, 11 June, 2 August; 7500, Sierra Mojada, Coahuila (27°17′4.1″N, 103°42′8.7″W), 1603 m, 27 July; 7501, army toll at Hércules, Coahuila (28°3′7″N, 103°48′3″W), 1329 m, 28 July; 7524-6, 7575-6, Rancho El Gatunozo, mpio Camargo (26°6′50.7″N, 104°5′51.4″W), 1352 m, 28–29 July; 7584, Lago Texcoco (28°5′24.8″N, 104°5′9y″W), 1345 m, 29 July; 7597, Lomas El Berrendo, mpio Coyame (29°42′16.5″N, 105°19′34.9″W), 1635 m, 30 July; 7808-15, llano 3 km N Chihuahua–Durango state line, Hwy 49, km 150, mpio Jiménez (26°41′13.8″N, 104°16′8.3″W), 1230 m, 5 August; 8024, 8042, Balneario División del Norte, mpio Jiménez (26°53′32.8″N, 104°22′17.8″W), 1369 m, 4 September; 8048, betw División del Norte and Hwy 45 (26°47′15.9″N, 104°21′2.0″W), 1280 m, 5 September; 8072, intersection Valle de Allende, mpio Valle de Allende, betw Jiménez and Parral (26°59′17.9″N, 105°24′43.3″W), 1666 m, 6 September.

The distribution of these samples blankets the localities mapped and recorded by Lemos-Espinal, Smith and Chiszar (2000b) and Lemos-Espinal et al. (2002), but in addition localities in the southern part of the state from the vicinity of Parral to the Coahuila border are represented. All conform with the defining features of the species.

Of the 27 females, the smallest (6790, 9 April) is 38 mm SVL; 9 fall between 50 and 57 mm SVL (19 April–29 July); 4 are 59–62 mm SVL (10 June–5 August); and all others are 66–74 mm SVL (7 April–6 September). One, at 60 mm SVL (28 July), has well-developed eggs, 10 mm in length. Maturity is probably reached at a size little if any smaller. One specimen, 50 mm SVL, determined as a female by dorsal pattern and absence of enlarged postanals, has a pair of small,

distinct, gular semeions, conjoined medially. No other female has any evidence of either gular or abdominal semeions. That specimen is from within the known range of the species, between the 1st and 2nd enclaves of Lemos-Espinal et al. (2002).

The dorsal pattern is similar in all females. The dorsolateral light lines are not or weakly evident in three of the largest, moderately developed in most, prominent although not sharply defined in a few at less than 63 mm SVL. The dorsolateral dark spots invade at least to some extent, or interrupt, the adjacent light lines, in all.

Fifty-four are males. The smallest is 41 mm SVL (11 April). Eleven fall between 42.5 and 55 mm SVL (8 April–10 June). Larger specimens, 57–75 mm SVL, were taken 8 June–6 September, except for two, 54 mm SVL, taken 30 July and 3 August.

All males have gular semeions, and only three, 41 and 49 mm SVL, lack distinct evidence of abdominal semeions. In only 5 (41–55 mm SVL) are the gular semeions separated or united by a bridge only one scale long.

The male dorsal pattern varies ontogenetically. The largest males are unicolor above and on sides. Most show little evidence of dorsal dark spots, except in most juveniles. Most, at all sizes, have a dark lateral stripe. The dorsolateral light lines are poorly defined in almost all adults, and in most juveniles.

Sceloporus c. clarkii Baird and Girard. Twenty-nine: 6691-5, 6703-4, 6706, Ejido Dolores, Guadalupe y Calvo (25°58′57.6″N, 107°10′11.5″W), 954 m, 3 April; 7168, 1 km N Microondas San Luis, Sierra San Luis, at U. S. border (31°19′30.7″N, 108°45′20.8″W), 2074 m, 12 June; 7204, Cañon de la Tinaja, mpio Casas Grandes (30°22′26.2″N, 108°14′37.6″W), 2120 m, 13 June; 7320-5, km 50.5, Samachique–Batopilas (27°6′53.8″N, 107°39′52.4″W), 687 m, 17 June; 7333-44, 7371, Arroyo El Camuchil, Batopilas (27°1′34.1″N, 107°45′44.5″W), 435 m, 19 June.

Among the 17 males, the smallest (6695, 3 April; 7204, 13 June), 58 mm SVL, are of the northern series. Among the southern ones, the smallest with abdominal and gular semeions well developed is 71 mm SVL; most smaller ones, including one at 71 mm SVL, exhibit no evidence whatever of either abdominal or gular semeions. An exceptional one, at 59 mm SVL, has rudiments of both. At more than 70 mm SVL, where present the gular semeions are remarkably equally well developed, regardless of SVL, although they are obscured by melanization in some of the largest. The abdominal semeions are developed to an equal extent in most, but in three (86–101 mm SVL) they are less intense, markedly so in two, than in the others. The largest male is 101 mm SVL.

The 12 females vary from 57 to 92 mm SVL. Abdominal semeions are occasionally (two of the largest) very dimly evident; in all others there is no evidence of them whatever. Gular striae are enlarged and partly or wholly black in the four largest specimens (85–92 mm SVL). A central blue gular area occurs in the four largest and the two smallest specimens (57, 63 mm SVL); all others lack any evidence of gular striae. The single female from northern Chihuahua is 64 mm SVL.

Although we regard the northern and southern populations as consubspecific (Lemos-Espinal, Chiszar and Smith, 2001), JLE has observed a strong difference in behavior. Northern individuals are very wary, secretive and difficult to approach, whereas southern ones are bold, readily approached and captured. A difference in predation pressure is likely between the two areas.

Sceloporus cyanostictus Axtell and Axtell. One: 6945, Cueva de Tabaco, Sierra Texas, mpio Matamoros, Coahuila (25°33′54″N, 105°5′47″W), 1133 m, 5 June. An immature female, 69 mm SVL; 39 dorsals; 17-18 femoral pores; 2-3 supraoculars divided. The black collar is short, on two scale rows. The dorsum has scattered light scales (color indeterminant), as described by Axtell and Axtell (1971). The map in Wiens et al. (1999) depicted occurrence of the species in approximately the same area as the present report in extreme southwestern Coahuila, although the species is otherwise known only from extreme southeastern Coahuila.

Sceloporus sp. (*grammicus* group). Thirteen: 6678-86, Mesa Ejido El Zorrillito, Guadalupe y Calvo (26°3′34.8″N, 106°57′38.8″W), 2595 m, 3 April; 8149-50, Arroyo Seco, km 16.5 Hwy 127 (28°15′45.4″N, 107°29′35.1″W), 2191 m, 7 September; 8280-1, Hwy 127, mpio Bocoyna (27°34′51.2″N, 107°33′53.3″W), 2313 m, 9 September.

As pointed out by Lemos-Espinal, Smith and Chiszar (2001), these diminutive lizards are of an unnamed species, currently under study by J. W. Sites, G. Lara-Góngora and associates (pers. com.). The five males are 37–50 mm SVL, all with a conspicuous black medial border on each abdominal semeion and a black gular collar; the borders are smaller in juveniles, broader and longer in adults, connected medially with the black collar in the latter; collar incomplete in the young.

The eight females vary from 36 to 53 mm SVL. No abdominal semeions are present, except usually for dim evidence of their medial borders. The throat is lightly pigmented, with scattered blue scales; except in smaller specimens, there is a black patch on the shoulders. In some, the posterior central gular area is pale blue.

Sceloporus horridus albiventris Smith. One: 6705, Ejido Dolores, Guadalupe y Calvo (25°58′57.6″N, 107°10′11.5″W), 954 m, 3 April. An immature female with 3-3 femoral pores. The only other localities of record for Chihuahua are in Tanner (1987), all in the same general area.

Sceloporus j. jarrovii Cope. Sixty-three: 6674-5, Río Verde, El Vergel–Guadalupe y Calvo Hwy (26°42′11.7″N, 106°10′18.1″W), 1159 m, 2 April; 6709-10, Ejido Terreros, km 170 Parral–Guadalupe y Calvo Hwy (26°12′1.1″N, 106°35′12.9″W), 2639 m, 4 April; 6711, 10 km E Ejidos Dolores (25°59′51.6″N, 107°6′43.3″W), 1409 m, 4 April; 7166-7, 7192, 1 km N Microondas Puerto San Luis, Sierra San Luis, nr U.S. border (31°19′30.7″N, 108°45′20.8″W), 2074 m, 12 June; 7302, Pacheco (30°5′1.7″N, 108°20′29.4″W), 1949 m, 14 June; 7311, betw García and El Largo (29°43′55.9″N, 108°15′48.0″W), 2244 m, 15 June; 8157-63,

Arroyo Seco, km 16.5, Hwy 127 (27°15′45.4″N, 107°29′35.1″W), 2191 m, 7 September; 8201-2, Rancho La Manzana, nr Bocoyna (28°4′51.8″N, 107°34′26.3″W), 2238 m, 7 September; 8224-9, betw Creel and San Rafael (27°31′18.2″N, 107°50′50.5″W), 2313 m, 8 September; 8282-7, Hwy 127, mpio Bocoyna (27°39′51.2″N, 107°35′53.3″W), 2313 m, 9 September; 8307-12, 8316, Cusarare (27°32′22.4″N, 107°32′38.4″W), 2302 m, 9 September; 8317-8, 8396, nr detour to Tejaban, Hwy 127, mpio Guachochi (27°33′11.5″N, 107°31′47.3″W), 2332 m, 10 September; 8420-4, Napuchis (27°18′19.1″N, 107°31′40.2″W), 2179 m, 11 September; 8498-9, Basigochi de Aboreachi (27°12′12.2″N, 107°22′45.0″W), 2409 m, 11 September; 8503-18, 15 km S Basigochi de Aboreachi (27°5′26.3″N, 107°14′40.3″W), 2400 m, 11 September.

The three largest of 33 females (81–90 mm SVL) have a dorsal pattern like that of adult males, with the dorsal scales light-centered, dark-edged. Only one other, at 72 mm SVL, is simlarly marked. The largest one without such a pattern is 78 mm SVL. Two are 68 mm SVL, all others smaller and immature. The smallest (8424) is 44 mm SVL. None has an extended black collar.

Of the 30 males, all 8 at 70–84 mm SVL lack the posterior light border of the black collar, which is extended posteriorly several scale rows farther than in other specimens. All of the others possess the light posterior border of the collar; the largest is 80 mm SVL, the smallest 53 mm SVL. Males differ from females in having a distinct, black, posteroventral inguinal blotch, more conspicuous in adults than in juveniles.

Sceloporus magister bimaculosus Phelan and Brattstrom. Four, all juveniles: 7444, Rancho Peñoles (27°7′49.6″N, 103°48′45.0″W), 1194 m, 25 July; 8023, Ejido San Dionisio, mpio Tlahualilo, Durango (26°14′39.7″N, 103°38′43.6″W), 1103 m, 3 September; 8046-7, betw División del Norte and Hwy 45 (26°47′13.9″N, 104°21′2.0″W), 1280 m, 5 September.

All localities lie near the extremes of the range in southeastern Chihuahua, southern Coahuila and northeastern Durango, as mapped by Parker (1982).

Sceloporus merriami annulatus Smith. Eight: 6815-22, mts in front of Rancho El Virulento de Afuera (28°45′50.5″N, 104°19′12.8″W), 1775 m, 11 April. Lemos-Espinal, Smith, Auth and Chiszar (2001) reported the subspecies from the same vicinity. These specimens conform well with the diagnostic characteristics of this exceptionally distinct taxon.

Sceloporus merriami ballingeri Lemos-Espinal et al. Seventy-two: 7900-38, 7943-75, Cementario de La Campana, mpio Tlahualilo, Durango (26°7′39.1″N, 105°41′0.0″W), 1123 m, 2 September. The original description of this subspecies (Lemos-Espinal, Smith, Auth and Chiszar, 2001) was based on specimens from the same locality as the present. They conform with the diagnostic characteristics of the taxon.

Sceloporus merriami williamsi Lemos-Espinal et al. Four: 7585-8, Cañón del Pegüis (29°30′24.1″N, 104°40′0.0″W), 1346 m, 29 July. They are from the same locality as some of the types reported in the original description by Lemos-Espinal, Chiszar and Smith (2000), and conform with the diagnostic characteristics of the subspecies.

Sceloporus nelsoni barrancorum Tanner and Robison. Twenty-six: 6697-8, 6707-8, Ejido Dolores, Guadalupe y Calvo (25°58′57.6″N, 107°11′11.5″W), 954 m, 3–4 April; 7345-65, Arroyo El Camuchil, Batopilas (27°1′37.3″N, 107°44′20.4″W), 550 m, 19 June.

As pointed out by Lemos-Espinal, Smith, Auth and Chiszar (2001), this subspecies differs from *S. n. nelsoni*, as stated by Tanner (1987), primarily on the basis of adult male pattern and enlarged postanal scales. The size is also smaller.

The largest of 9 females is 58 mm SVL, of 17 males 59 mm. All males have enlarged postanal scales. Only one is completely black ventrally as illustrated in Tanner (1987). The others have the light area on the ventral surface of the head about equal in size to the black area. The black on chest, however, is continuous with the black on the abdomen.

Sceloporus p. poinsettii Baird and Girard. Four: 6810, 2 km NW Rancho El Consuelo (28°43′3.0″N, 104°18′4.3″W), 1662 m, 11 April; 7122, Llano Ejido Flores Magón (29°58′32.7″N, 107°6′11.8″W), 1494 m, 11 June; 7449-50, Rancho Peñoles (27°7′49.6″N, 103°48′45.0″W), 1194 m, 25 July.

All specimens have 32–33 dorsals and a laterally striate dorsal pattern with poorly defined dark bands medially. This subspecies occurs apparently thoughout northern and eastern Chihuahua, according to records herein, Lemos-Espinal, Smith and Chiszar (2000a), Lemos-Espinal, Smith and Chiszar (2001) and Tanner (1987).

Sceloporus poinsettii macrolepis Smith and Chrapliwy. Fourteen: 7940-1, Cementerio La Campana, mpio Tlahualilo, Durango (26°7′39.1″N, 103°41′00.0″W), 1123 m, 2 September; 8069-71, intersection Valle de Allende, mpio Valle de Allende, betw Jiménez and Parral (26°59′17.9″N, 105°24′43.3″W), 1666 m, 6 September; 8164, km 16.5 Hwy 127, Arroyo Seco (28°15′45.4″N, 107°29′35.1″W), 2191 m, 7 September; 8230-1, betw Creel and San Miguel, mpio Urique (27°31′18.2″N, 107°50′50.5″W), 2313 m, 8 September; 8425-7, Napuchis, 1 km N detour to Samachique, mpio Guachochi (27°18′19.1″N, 107°31′40.2″W), 2179 m, 11 September; 8519-20, 15 km S Basigochi de Aboreachi, mpio Guachochi (27°5′3.0″N, 1207°14′40.3″W), 2300 m, 11 September.

Dorsals 27–33; femoral pore totals 16–26 (only 2 of 14, with 16 and 19, fall below 20).

The pattern of *S. p. macrolepis* is strikingly unique in the entire species. Most surprisingly, in life adult males and females alike have a broad orange streak from near axilla to near groin, about 4 scales wide. In the present specimens it is still evident, but it presumably disappears under prolonged exposure to formalin and/or alcohol, inasmuch as it has not previously been recorded.

Secondly, this subspecies completely lacks the striated

pattern so conspicuous in all except juveniles of *S. p. polylepis* and *S. p. poinsettii*. Instead, there are several dark bands completely crossing the dorsum, in young and adults alike, and in adults a conspicuous whitish area lies in the two mid-dorsal intervening spaces.

Thirdly, all specimens have an even more conspicuously banded tail than other populations of the species, enhanced by the white interspaces.

The subspecies reaches an exceptionally large size, as noted by Tanner (1987), who recorded 117 and 109 mm as maximal SVL. In the present series of 14, the two largest specimens are 106 and 110 mm SVL.

The pattern of *S. p. robisoni*, as described by Tanner (1987), is distinctly that of *S. p. macrolepis*, with which we here synonymize it. Its supposedly distinctive reduced femoral pore count (usually less than 20) is not borne out by the variation here noted. Its type locality, Cuiteo, is surrounded by localities for *S. p. macrolepis*.

The "intergrades" reported by Tanner (1987) appear, on a geographic basis, to be for the most part between *S. p. poinsettii* and *S. p. polylepis*. A few may actually represent *S. p. macrolepis*, whose dorsal count may be as high as 33, whereas Tanner (1987) took 29 as the maximum.

In Chihuahua, *S. p. macrolepis* appears to occur mostly to the west of the Continental Divide, although southward it occurs on eastern slopes. The taxon's range may be dichopatric relative to its conspecifics.

Sceloporus poinsettii polylepis Smith and Chrapliwy. Twenty-nine: 7509-23, 7540-1, 7547-53, 7554-7, Rancho El Gatunozo, mpio Camargo (26°6′50.7″N, 104°5′51.4″W), 1352 m, 28 July; 8026, Balneario División del Norte, mpio Jiménez (26°53′32.8″N, 104°22′17.8″W), 1369 m, 4 September.

Dorsals 36–42 ($\bar{x}$ = 38.4, N = 29); combined femoral pore count 20–28 ($\bar{x}$ = 23.1, N = 29). The range of variation in dorsals categorically exceeds that of the other subspecies of the state, except in the area of intergradation in central eastern Chihuahua between it and *S. p. poinsettii* (Lemos-Espinal, Smith and Chiszar 2000b).

A strong pattern characteristic partly distinctive of this subspecies is the presence of black striae along the edges of the dorsal and dorsolateral scale rows. A middorsal series of large, squarish black spots is present or not. *S. p. poinsettii* is similar, but the striae tend to be confined to the dorsolateral scale rows, and the middorsal dark spots tend to be laterally expanded. No striae whatever are present in *S. p. macrolepis*, and the dorsal spots are greatly expanded laterally.

Sceloporus slevini Smith. Seven: 7312, Chuhuichupa (29°37′27.5″N, 108°22′5.6″W), 2181 m, 15 June; 8151-6, Arroyo Seco, km 16.5 Hwy 127 (28°15′45.4″N, 107°29′35.1″W), 2191 m, 7 September.

One, a female, is unicolor. Two are males, 5 females.

Sceloporus undulatus speari Smith et al. Fifty-six: 7615-70, Rancho El Setenta, mpio Juârez (31°11′16.2″N, 106°30′20.7″W), 1334 m, 1 August.

The present series has almost twice as many freshly-caught specimens as the original (Smith et al., 1995) type series (31). In the latter, taken 29 September–4 October, the small size class, less than 38.5 mm SVL, was represented by only 3 specimens. The present series, on the contrary, includes 19 members of the small size class, 27–34 mm SVL. All others, of both sexes, were 49 mm SVL or more, and were presumably reproductively mature. The maximum in each sex, taken 1 August, was 6(F) and 3(M) mm less than in the 29 September–4 October series. Thus the subspecies appears to mature in one year, and longevity may be little more than that.

The 23 adult females were 53–63 mm SVL. None possessed any evidence of abdominal semeions, but small, light blue gular semeions were present in all, usually faint but readily evident in some, conspicuous in three. The dorsal pattern varied but little; sharply defined dorsal and lateral light stripes were present in all. The paravertebral dark spots are all small, little or no larger than one scale in size, and aligned in a series bordering the dorsolateral light lines medially; in some they are enclosed in a streak darker than the vertebral area, which is three scale rows plus two half-rows in width.

The 14 adult males vary from 49 to 60 mm SVL. They all have well developed abdominal and gular semeions. The black median border of the abdominal semeions extend from nearly the axillary level to a short distance from the inguinal level, are expanded at neither end, and are separated medially by several scale rows. Lateral to the black borders is a pale blue streak, bordered laterally by the light tan area bordering the dark brown borders of the lateral light stripes.

The two gular semeions are separated by at least one scale width in 7, are narrowly united by the width of one scale row in 5, and are broadly united in 2. There is no apparent ontogenetic change in the degree of separation or union. There is a narrow dark blue edging medially and/or posteriorly on the semeions; in one there is a weakly melanistic diffusion anterior to the semeions. In dorsal pattern males are little different from females. The paravertebral dark spots tend to be less well defined, although their enclosing dark streak is apparent in most.

Among the 19 juveniles, six are females, and show no evidence of gular semeions. Seven of the males also lack them; 6 have them, but in only two are they visible to the naked eye. No abdominal semeions are visible even under magnification. The dorsal pattern in both sexes is like that of adults.

Sceloporus virgatus Smith. One hundred two: 7125-64, 7171-91, 1 km N Microondas Puerto San Luis, Sierra San Luis, nr U. S. border (31°19′30.7″N, 108°45′20.8″W), 2074 m, 12 June; 7206, Cañón de la Tinaja, mpio Casas Grandes (30°22′26.2″N, 108°14′37.6″W), 2120 m, 13 June; 7298-7301, Pacheco (30°5′1.7″N, 108°20′29.4″W), 1949 m, 14 June; 7306, betw Jovales (= Colonia Hernández) and Garcí a (30°1′39.1″N, 108°18′28.9″W, 2148 m, 14 June; 8165-99, Arroyo Seco, km 16.5 Hwy 127 (27°15′45.4″N,

108°29′35.1″W), 2191 m, 7 September.

The average size of this species in this sample was 50.7 mm (s.e.m. = 107 mm, 20–68, N = 100). Females were larger ($\bar{x}$ = 57.85 mm, s.e.m. = 0.71 mm, 47–68, N = 48) than males ($\bar{x}$ = 48.0 mm, s.e.m. = 0.74 mm, 38–56, N = 44).

At Microondas Puerto San Luis, in the breeding season (12 June), 32 females were collected; 24 were gravid and with orange surrounding the gular semeions (av. body size 62.42 mm, s.e.m. = 0.76 mm, 56–68 mm, N = 24). One was gravid but lacked the typical blue gular semeions, although light orange was present on both sides of the gular region. Seven were not gravid, and although all had the typical blue semeions, none had any trace of the orange coloration (av. body size 51.6 mm, s.e.m. = 1.0, 47–54 mm, N = 7). The av. body size of males at this locality was 49.3 mm (s.e.m. = 0.62, 44–56 mm, N = 29).

At Arroyo Seco, long after the breeding season (7 September), 14 females were collected, none gravid, and none with any trace of the orange color around the typical blue semeions, which were present in all. Both sexes averaged smaller at this site than at the preceding one. The av. size of the females was 53.7 mm (s.e.m. = 0.73, 49–58 mm, N = 14). Male av. size was 46.0 mm (s.e.m. = 0.28, 45–48 mm, N = 12). Eight hatchlings were taken at this site, none at the preceding one. Their av. SVL was 22.3 mm (s.e.m. = 0.53 mm, 20–25 mm, N = 8). The blue gular semeions were readily visible in all.

The significance of the discrepancy in size of the specimens in these two series remains to be explained.

Acknowledgments

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Literature Cited

Axtell, R. W., and C. A. Axtell. 1971. A new lizard (*Sceloporus jarrovii cyanostictus*) from the Sierra Madre of Coahuila, Mexico. Copeia 1971:89-98.

Lemos-Espinal, J. A., D. L. Auth, D. Chiszar and H. M. Smith. 2002. Year 2000 data on the distribution and variation of some lizards of the *Sceloporus undulatus* complex in Mexico. Bull. Chicago Herp. Soc. 37(2):29-31.

Lemos-Espinal, J. A., D. Chiszar and H. M. Smith. 2000. The lizard *Sceloporus rnerriarni* (sic) in Chihuahua, Mexico. Bull. Maryland Herp. Soc. 36:86-97.

Lemos-Espinal, J. A., D. Chiszar and H. M. Smith. 2001. The identity of *Sceloporus clarkii uriquensis* Tanner and Robison (Reptilia: Sauria). Bull. Maryland Herp. Soc. 37:115-118.

Lemos-Espinal, J. A., H. M. Smith and D. Chiszar. 2000a. New distributional and variational data on some species of lizards from Chihuahua, Mexico. Bull. Chicago Herp. Soc. 35:181-187.

Lemos-Espinal, J. A., H. M. Smith and D. Chiszar. 2000b. New data on the geographic ranges of *Sceloporus belli* and *S. undulatus* in Chihuahua, Mexico (Reptilia: Sauria). Bull. Maryland Herp. Soc. 36:133-138.

Lemos-Espinal, J. A., H. M. Smith, D. A. Auth and D. Chiszar. 2001. The subspecies of *Sceloporus merriami* (Reptilia: Lacertilia) in Chihuahua and Durango, Mexico. Bull. Maryland Herp. Soc. 37:123-129.

Lemos-Espinal, J. A., H. M. Smith and D. Chiszar. 2001. Distributional and variational data on some species of turtles and lizards from Chihuahua, Mexico. Bull. Chicago Herp. Soc. 36(10):201-208.

Parker, W. S. *Sceloporus magister*. Cat. Am. Amph. Rept. (290):1-4.

Smith, H. M., D. Chiszar and J. A. Lemos-Espinal. 1995. A new subspecies of the polytypic lizard species *Sceloporus undulatus* (Sauria: Iguanidae) from northern Mexico. Texas J. Sci. 47:117-143.

Smith, H. M., D. Chiszar, J. A. Lemos-Espinal and E. L. Bell. 1995. The Cabeza de Vaca Basin subspecies of the lizard *Sceloporus undulatus*. Trans. Kansas Acad. Sci. 98: 44-60.

Tanner, W. W. 1987. Lizards and turtles of western Chihuahua. Great Basin Nat. 47: 383-421.

Wiens, J. J., T. W. Reeder and A. Nieto-Montes de Oca. 1999. Molecular phylogenetics and evolution of sexual dimorphism among populations of Yarrow's spiny lizard (*Sceloporus jarrovii*). Evolution 53:1884-1897.

Bull. Chicago Herp. Soc. 37(9):168, 2002

Book Review: *Amphibians and Reptiles of Pennsylvania and the Northeast* by Arthur C. Hulse, C. J. McCoy and Ellen J. Censky 2001. Comstock Publishing Associates, a Division of Cornell University Press, Ithaca and London xi + 419 pp. Hardcover. ISBN 0-8014-3768-7. $42.50*

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This volume continues a recent trend in statewide amphibian and reptile books in that it focuses on the fauna of one state but also includes information on adjacent regions. As was the case with the *Amphibians and Reptiles of Connecticut and Adjacent Regions* (Klemens, 1993), additional geographical emphasis is not complete. It is aimed primarily at attracting a wider audience (and is probably the publisher's idea). The additional coverage for the present volume is limited to background information (see below), expanded range maps and a few more additional accounts beyond what would have been included if the adjacent regions had been omitted.

The book is divided into the usual sections. The Preface has a brief explanation of the authors' intended audience, which is "wide." This is followed by an admission of the possibility that they may not have succeeded in satisfying all audience categories, but I would argue that they did a wonderful job in this regard. The Introduction includes useful and interesting sections on the landforms, climate, and vegetation of the covered region (not just Pennsylvania). Next come sections explaining the contents of each species account, Observing and Collecting Amphibians and Reptiles, identification keys, a section of color plates and the species accounts. The book ends with an appendix of data culled from the authors' many years experience with Pennsylvania amphibian and reptiles, a glossary, literature cited, and an index.

The identification keys are of the typical dichotomous variety and are illustrated with line drawings. In addition to keys for adults, there are keys to larval amphibians (both salamanders and frogs). The keys do not distinguish subspecies when more than one occurs in the region.

The 133 color plates are approximately 7 × 5 cm and are grouped in the beginning of the book. The quality of the plates is excellent. Photos of color phases, close-ups showing diagnostic features, juvenile forms, and eggs are mixed in with the typical full adult shots.

The species accounts consist of the usual sections: Description, Confusing Species, Habit and Habitats, Reproduction, Remarks, and Distribution. A map shows the general range of the species in the Northeast (Pennsylvania, New York, New Jersey, Massachusetts, Rhode Island, Connecticut, Vermont, New Hampshire, and Maine) as well as dots to denote known locations in Pennsylvania. The records upon which these dots are based are not given; rather, the interested reader is referred to the earlier work of McCoy (1982). The etymology (Latin or Greek origins) of the scientific names is given at the beginning of each account.

The species accounts pull heavily from the published literature, emphasizing the research from the Northeast when available. Perhaps more important, however, is the extensive original data from the authors' many years of field experience. Most field biologists have many observations squirreled away in their field notes, but these valuable gems never make it to print. The combined experience of Hulse, McCoy and Censky is available in this volume and it is amazing.

The combination of original data and data from the published literature sometimes becomes confusing and makes for bookkeeping problems in the species accounts. For example, there are many instances where a statement is made but not directly attributed to a literature citation or explicitly tied to the authors' own experiences. This will make it difficult to accurately cite any of the original data. Nonetheless, the wealth of information in the species accounts is incredible and I'm sure I will discover new facts with each re-reading.

Any confusion one might encounter concerning the source of the data in the species accounts is more than compensated for in the Appendix. Here the source of the data is very clearly from the authors' examination of Pennsylvania specimens. This section will become an indispensable reference source for amateur and professional herpetologists alike. Included are data on size (length) including means, ranges, differences between the sexes, and size at maturity. There is also a section listing clutch/litter size along with the extent of correlation between female body size and clutch/litter size.

Overall this is an amazing book with an extensive collection of previously published and original data on Pennsylvania amphibians and reptiles. I found only a few typos in the nearly 400 pages of text. I recommend this book to everyone interested in North American herpetology.

Literature Cited

Klemens, M. W. 1993. Amphibians and reptiles of Connecticut and adjacent regions. State Geological and Natural History Survey of Connecticut, Bulletin No. 112.

McCoy, C. J. 1982. Amphibians and Reptiles in Pennsylvania: Checklist, bibliography and atlas of distribution. Spec. Publ. Carnegie Mus. Natur. Hist. 6:1-91.

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* This and many other books and other products are available at Amazon.com. If you first visit the CHS web site, www.chicagoherp.org, and then use the Amazon icon you find there to enter Amazon's site, then any purchases you make will help to support the CHS.

Bull. Chicago Herp. Soc. 37(9):169-171, 2002

HerPET-POURRI

by Ellin Beltz

7,000 Dead Lizards in Luggage

"Customs officials seized 7,000 mummified lizards from a man boarding a plane in Egypt. Airport staff said Syrian Ahmed Mahmoud Salem was about to fly to the Jordanian capital Amman. They said he was trying to smuggle the lizards to mix them with honey to make an aphrodisiac potion. He was allowed to travel, but the lizards were confiscated as Salem had violated export procedures." [*HerpDigest* 3(1), from Allen Salzberg]

It's creepy and it's ooky

Usually, I reprint letters other people send me. The letter that prompted this reply was from Down Under and asked how to get rid of certain invasive pests. "Dear Maurice: We tried to collect keeper info on this when Chicago Herp Society wrote the *Care in Captivity* pages about 10 years ago. We were mostly in Chicago inner city apartments or suburban homes. Pests include silverfish, earwigs, roaches, flies, etc. I just switched computers when the old one failed and I'm still working on getting out my old files. But here's from memory. . .

• Flies—fly traps, feed to your herps. NZ Herp Society is best source of fly trap drawings. They keep tons of geckos.

• Fruit flies—take salt shaker bottle with holes on top and put in wine vinegar plus one drop dish washing detergent. Leave on counter. Flies kill selves by asphyxiation with soap on the spiracles.

• Earwigs—make lovely earwig habitat from books from the junk (used trash) store. Empty earwig traps into killing bottle as most herps find them inedible.

• Silverfish—live under things and like to live in cat litter or bird litter (commercial products), also dust/dirt. Keep place clean, clean, clean and make little silverfish habitats in known locations and empty during daylight when they are less active.

• Roaches—baby powder (powdered mineral talc) or boric acid powder, sink scouring powder, washing soda, etc. (commercial products which are surfactants when moistened.) Grind the powder as fine as you can and lay in fine lines where roaches like to travel. Even put out watering stations so the roaches will have to walk in your powder. It is transferred to the spiracles during roach grooming and will then moisten from the insect's own moisture and clog the spiracle with a soap bubble (see fruit flies). We had both black and brown roaches. Brown ones breed everywhere and powder is the only way. Black ones breed with queen chambers. Find that and kill that by dropping into a fire pit or can fire (even a barbecue in a pinch!) and they will be gone.

Realize I only know U.S. pests, but as many of our horrors have been introduced to your islands, I hope this is of some help."

That's a lot of candles!

"Cairo Zoo is celebrating the 260th birthday of what could be the world's oldest tortoise, by putting a birthday cake on its back. Officials say they know the Galapagos giant tortoise was born in 1742, but have had to estimate the month. A *Guinness Book of Records* spokeswoman told Ananova the oldest tortoise they know of is a Madagascan radiated. It was presented to the Tongan Royal Family in 1777 and died in 1965 aged 188. The spokeswoman says Cairo Zoo hasn't yet contacted them. 'We recommend they get in touch if they have the evidence. It certainly sounds as if it's older than what we list. We're interested in that,' she added." [*Reuters*, August 4, 2002, from Allen Salzberg]

Knee High by When?

"Iowa Farmers Consider Raising Gators—Carnivores Could Solve Pork Problem. A couple of alligators have left the swamps and have made their home in western Iowa as part of new farming research project. Researchers from Iowa State University are checking the gators to see how they adapt to living in the heartland. 'They have quadrupled in weight and are growing fairly well,' researcher Kris Kohl said. The university wants to know if a gator farm could solve a major problem caused by hog farms. The reality is that many hogs die before they can be taken to market. Farmers are then left trying to figure out what to do with the carcasses. It may sound disgusting, but researchers think hog carcasses could be used to feed the animals at a gator farm. The alligators can then be harvested for their meat and their hides. . . . About 500,000 gators are reportedly harvested for their meat or leather every year. Most of those animals come from Florida, Texas, and Louisiana. The ISU farm in Castana is open to the public. Castana is about 60 miles north of Council Bluffs, Iowa." [Channel 4000 (Mendota Heights, MN), August 28, 2002, from Wes von Papineäu]

Just keep looking

"A new species of 'carnivorous predator armed with venomous fangs' has been discovered in Central Park, the heart of the nation's largest city says Reuters July 26, 2002. The poisonous predator is a tiny centipede that may well be the world's smallest, about half the usual length of centipedes and so unusual that scientists have classified it as the only species in a completely new genus. Said one scientist, 'It tells us something shocking about what we don't know, rather than what we know. There are 1.5 million species named, but there could be as many as 10–50 million species living on this planet.'" [*GREENlines* #1674, August 1, 2002]

Dasvidanya baby

Staff of the tropical zoo in Tula (south of Moscow) discovered a runaway anaconda after 24 days' absence. The three-meter snake lived out of its cage since August 2, Yelena Krasnova, leading serpentologist at the zoo told RIA Novosti. Where the serpent lodged all this time remains a mystery even now. There was a constant vigorous search for the fugitive reptile, but the old building's cellars have quite a few distant corners to hide in. After feeling the misery of stray life, the snake ended up returning home because time came for it to molt its

skin, Krasnova explained. Seeking water, the beast headed for the abandoned cage. The process of tracking the anaconda down had something of a detective story in it. To begin with, scraps of old snake-skin were found in the zoo's biggest aquarium, leading the staff to restrained exultation. Next, a light broke off suddenly at one of the terrariums. Trying to find out what the matter was, the amazed personnel discovered torn wirework, a whole snake-skin and the wretched creature huddled between the terrarium walls. The anaconda lost much of its weight, so a special diet and microclimate had to be provided for it. Now the vagabond snake is adapting back for cage life and regaining its size. [*Pravda* (Russia), August 27, 2002, from Wes von Papineäu]

Losing more eggs to idiots

Sea turtles face many threats in this world. And every year there's a new story about someone stealing their eggs which are considered a delicacy or an aphrodisiac. A member of the Florida Fish and Wildlife Conservation said that several black markets for the eggs exist and claims "They're sold just like drugs." But sea turtle eggs are a lot cheaper than other illegal substances. A dozen costs $36 in certain parts of southeast Florida including Little Havana in Miami. While certain conservationists claim to be unaware of poaching over the past ten years, now they are paying attention; more than ten poached nests were found in one small area in Florida where 90 percent of all continental U.S. sea turtle nesting occurs. Officials now estimate poaching consumes tens of thousands of eggs per year. "A recent undercover buy of six eggs led to the arrest of [a 43-year-old man], of Riviera Beach, who, the authorities said, had 341 eggs in his home," according to the *New York Times*, which added that, "If convicted of a misdemeanor federal charge of possessing and selling an endangered species, a misdemeanor punishable by one year in jail and up to $50,000 in fines. . . . Even drug addicts are getting into the business. Because selling turtle eggs is a misdemeanor punishable by only a fine and little jail time, while stealing the eggs from a beach is a felony punishable by a stiff prison sentence, poachers are using middlemen to dig up the nests. Addicts looking for cash retrieve the eggs for a fee and turn them over to the dealers, who resell them for as much as $3 apiece on the black market." [August 2, 2002, from Jim Stuart]

Dubious distinction

The Dead Zone at the mouth of the Mississippi River Delta is bigger than in any previous year according to the *Baton Rouge Advocate*, July 29, 2002. This year more than 8,500 square miles offshore is unable to support any marine life because algae blooms lead to low oxygen levels. The algae bloom in response to excess nitrogen runoff from sewage, industry and farms. [*GREENlines* #1676, August 5, 2002]

Slow, turtles at play

Work on a bridge [in Montgomery County, New Jersey] will be delayed because it is not allowed during turtle mating season. County officials planned to replace the Cherry Hill Bridge in the fall, but state law prevents them from disturbing the area during mating season. They have not decided when the work will begin at the . . . site. While it was not immediately known what species was found in the area, environmentalists say they likely are wood turtles, which are protected by the state. They say the work could stir up silt, which could kill the turtles. [*Associated Press*, August 5, 2002, from Karen Furnweger] This reminds me, do children who grow up by "Slow Children at Play" signs become "Slow Men at Work"?

Not native species

• A 37-year-old Roseville, Michigan, man was in fair condition at [a hospital] after being bitten by a tropical snake. The man, whose name was not released, was being treated for a mamba bite, a hospital spokesperson said. It was not clear where the man came into contact with the green mamba, a venomous snake native to tropical west Africa and not found in Michigan's wilds. [*Detroit Free Press*, August 3, 2002, from Wes von Papineäu]

• A two-foot-long American alligator was found in South Bend, Indiana, by neighbors who saw a small alligator sitting by their side door. They caught it, duct taped its mouth shut and dropped it in a bucket before calling animal control to pick it up. A local veterinarian estimated the critter's age at about a year and suggested it might have been an abandoned or escaped pet. He said, "Setting [non-native animals] free is letting them die a slow death. Animals that are native to warmer climates would not survive a South Bend winter." [*South Bend Tribune*, July 30, 2002, from Garrett Kazmierski]

Shedd your matchmaker

"Three blue iguanas at the Shedd Aquarium have emerged as crucial players in a breeding program to save their species—newly designated the most endangered lizard in the world—from extinction. Only 10 to 25 of the lizards, native . . . to Grand Cayman are alive in the wild, occupying a habitat of about 1.5 square miles. About 90 live in captivity. . . . After centuries of falling prey to feral cats and dogs [the lizards were] further decimated when Grand Cayman became a tourist destination and the iguanas' habitat gave way to land development . . . ," according to the *Chicago Tribune*. Only about 10 to 25 individuals are left in the wild. Shedd is hoping for donors for its program which seeks to breed a population of 225 or more. These iguanas can live to about 80 years and grow to five feet in length. [August 9, 2002, from Ray Boldt]

Steve bashed again

By crikey, there's sure a lot of reviewers who don't like Steve Irwin. The latest salvo is from Steve Johnson, *Chicago Tribune* media critic: "Marlon Perkins, spare us. Steve Irwin . . . is back . . . with another of his so-called 'specials'. . . . The Down Under zookeeper who makes a handsome side income taunting big reptiles for the amusement of TV viewers messes around with a croc [whom he claims is out for revenge]. We should be so lucky. Anyone actually nibbling on this fellow's flesh would be likely to come away with a taste comprised of equal parts ham and cheese. . . . If . . . you consider Irwin's serial croc mockery a spectacle worthy of a Florida roadside attraction at best, you'll probably want to watch [something else from the media wasteland]." [August 9, 2002, from Ray Boldt]

Front page news

A 10-year-old North Side Chicago boy has been charged with stealing two snakes from Lincoln Park Zoo. The child who lives in Cabrini-Green was charged with burglary after taking Sally and Teddy, a boa and a bullsnake, from the zoo. Police heard that a group of boys were carrying the snakes around in a sack on the grounds of the housing project and rounded up the whole bunch of them. Finally one boy confessed that he and two others had been on zoo grounds after hours and taken the snakes. Sally, the boa, turned up in a West Side beauty parlor where it was being shown off by a 17-year-old girl. Patrons realized it was one of the two missing snakes and called police. The girl's boyfriend said he bought it from a couple of boys at an L stop on the South Side. [*Chicago Tribune*, August 10, 13, 14, 16, 17, from Ray Boldt] Worst pun of the series "Hissing in Action: Snakes Elude Hunt."

Hey United!

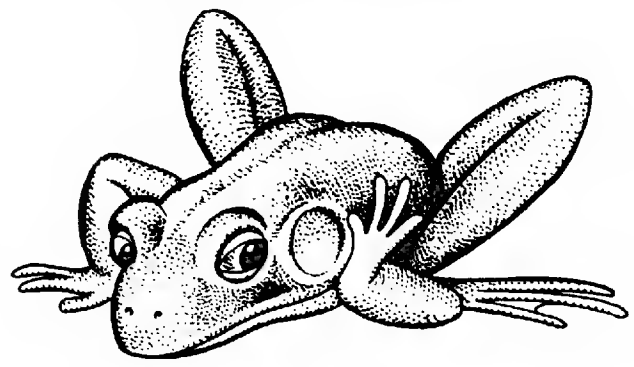
Here's a new way to fly: "The paradise tree snake of Southeast Asia, whose habit of gliding from tree to tree has been the subject of recent research by Jake Socha at the University of Chicago. In flight, the snake's body flattens and its belly forms a slightly concave channel. This creates an airfoil which produces lift, and that lift is enhanced by a sidewinding motion perpendicular to the direction of travel. . . . [The research], just published in *Nature*, reveals a remarkable aeronautical capability for a wingless creature. The shallow angle of descent and the scope of the snake's steering surpass that set by other gliding animals such as flying frogs." [*The Economist*, August 10, 2002, from Eloise Beltz-Decker]

Thanks to everyone who contributed this month and to Alan Rigerman, Bill Burnett, G. E. Chow, Claus R. Sutor and the New Zealand Herpetological Society for sending things which I hope to use next month. You can contribute, too. Send whole pages from newspapers or magazines with your name on each piece (use the little address labels laying around for this task) to: Ellin Beltz, P.O. Box 934, Ferndale, CA 95536. Letters can be sent to my E-mail address <ebeltz@ebeltz.net>. Wow, this column is approaching its 17th year anniversary! Become a contributor and get your name up here with all my great contributors!

Bull. Chicago Herp. Soc. 37(9):171, 2002

The Tympanum

Hobart M. Smith Honored by SWAN



Because of his frequent contributions to the *Bulletin of the Chicago Herpetological Society*, Hobart Smith is especially well known to CHS members. In fact, last year, he published a short autobiography here. I thought that readers would be interested to learn about something that Dr. Smith would probably be too modest to ever mention: In April, he received the highest honor of the Southwestern Association of Naturalists (SWAN), its W. Frank Blair Eminent Naturalist Award. Dr. Smith is professor emeritus at the University of Colorado. With more than 1400 publications, he has exceeded the output of Edward Drinker Cope (1840-1897) to become the most prolific herpetologist of all time. The great majority of his work focuses on the taxonomy, life history, biogeography, anatomy, and behavior of species found in the Southwest. His *Handbook of Lizards* and multi-volume *Synopsis of the Herpetofauna of Mexico* are considered to be classics. I own several of his books and still cherish the copy of his *Snakes as Pets* I received around my 13th birthday. Dr. Smith obtained all of his higher education in Kansas and is most noted for his research in Mexico. Therefore, I thought it was a perfect coincidence that the award was announced at the 2001 SWAN meeting held at Fort Hays State University in Kansas and bestowed at the 2002 meeting at the Universidad Autonoma del Estado del Morelos in Cuernavaca, Morelos, Mexico. Although certainly there in spirit, Dr. Smith did not feel up to the long trip south, so his colleague, Lee Fitzgerald of Texas A & M, accepted on his behalf. Congratulations to Dr. Smith on this well-deserved and long-overdue recognition. And **Happy 90th Birthday—September 26th!** This award is named for William Frank Blair (1912–1984). Dr. Blair was a mammalogist and herpetologist, a 36-year faculty member of the University of Texas, and a former SWAN president. The Blair Award recognizes excellence in a lifetime of commitment to outstanding study or conservation of the flora and fauna of the Southwest (defined by SWAN as Mexico, Central America, and the U.S. west of the Mississippi River and south of 40°N latitude). Other herpetologists, including Charles C. Carpenter - University of Oklahoma (1986), James R. Dixon - Texas A & M (1987), and Henry S. Fitch - University of Kansas (1991) have been chosen for the Blair Award and I'm hopeful that more will be in the future. For more information about SWAN see <www.emporia.edu/SWAN>. I would like to thank the many colleagues of Dr. Smith who assisted with the nomination by providing information or letters of support.

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Bull. Chicago Herp. Soc. 37(9):172-174, 2002

Herpetology 2002

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

GLIDING FLIGHT IN THE PARADISE TREE SNAKE

J. J. Socha [2002, Nature 418:603-604] notes that most vertebrate gliders, such as flying squirrels, use symmetrically paired "wings" to generate lift during flight, but flying snakes (genus *Chrysopelea*) have no such appendages or other obvious morphological specializations to assist them in their aerial movements. The three-dimensional kinematics of gliding in the paradise tree snake, *Chrysopelea paradisi*, indicate that the aerial behavior of this snake is unlike that of any other glider and that it can exert remarkable control over the direction it takes, despite an apparent lack of control surfaces. Wild-caught *C. paradisi* were videotaped and photographed jumping from a horizontal branch at the top of a 10-meter-high tower in an open field at the Singapore Zoological Gardens. Two video cameras were positioned to allow the coordinates of the head, midpoint and vent of the snake to be monitored throughout its trajectory. After takeoff, the snake dorsoventrally flattens its body from head to vent. Its body width roughly doubles, with the ventral surface becoming slightly concave. While falling, the head and vent are brought towards the midpoint to form an "S" shape, and the snake begins to undulate laterally. The flight trajectory shallows as lift is generated. *C. paradisi* turns without banking; instead turns are initiated by movement of the anterior body, and occur only during the half of the undulatory cycle when the head is moving towards the direction of the turn. The snake's best glide ratio (the ratio of horizontal distance gained to height lost) is 3.7, comparable to flying squirrels (*Petaurista petaurista*, 4.7), flying lizards (*Draco melanopogon*, 3.7), and flying frogs (*Rhacophorus nigropalmatus*, 2.1). The author suggests that the snake's unique combination of movement and postural regulation in flight probably requires specialized neuromuscular control.

MIDWIFE TOAD ADVERTISEMENT CALLS

J. Lea et al. [2002, Amphibia–Reptilia 23(2):151-159] found from previous studies with the Mallorcan midwife toad (*Alytes muletensis*) that gravid females show inconsistent phonotactic preferences for male calls unless they are highly motivated to mate; and, nongravid females will occasionally show phonotaxis to male advertisement calls. These results suggest that sometimes phonotaxis may not be related to seeking a mate. This article reports on experiments that give further support to a nonmating function of phonotaxis in this species. Males and metamorphs were played conspecific male and female advertisement calls. Males that were expected to be unmotivated to mate were not less likely to respond to, or less consistent in their choice of, female calls than males who were expected to be motivated to mate. Metamorphs not yet in breeding condition nevertheless showed positive phonotaxis. The authors suggest that Mallorcan midwife toads may sometimes show phonotaxis simply to seek out refuges where toads aggregate.

PREDATOR DETECTION BY DESERT IGUANAS

M. T. Bealor and C. O. Krekorian [2002, J. Herpetology 36(1):9-15] note that many antipredator behaviors function by hindering the ability of a predator to catch or consume prey once they are encountered. However, prey may also reduce predation risks by detecting predators before an encounter occurs. The authors tested the ability of the desert iguana (*Dipsosaurus dorsalis*) to detect and identify snake predators via chemoreception. Desert iguanas were exposed to chemicals from two sympatric snake species. The California kingsnake (*Lampropeltis getula californiae*), a species known to feed on lizards, was used as the predator stimulus, whereas the western shovel-nosed snake (*Chionactis occipitalis*), which feeds only on arthropods, served as a control for a general response to snake chemicals. Lizards were placed in terraria that previously housed live snakes or had been treated with distilled water or a pungent control. Overall tongue extrusion frequency and number of tongue extrusions prior to movement increased in response to chemicals from the California kingsnake but not in response to the western shovel-nosed snake. In addition, desert iguanas exhibited unusual slowness of movement and adopted a distinctive body posture in response to the predator stimulus. These results demonstrate that desert iguanas can detect chemical deposits from snakes and can discriminate between a snake species that feeds on lizards and one that poses no threat. In addition, the resulting low posture and slow movement may facilitate crypsis as the lizards attempt to gain information regarding the predator. Desert iguanas are herbivorous lizards and may use chemical cues to detect and avoid snake predators while foraging or when entering burrows.

SALAMANDER SELF-RECOGNITION

J. R. Gillette [2002, Herpetologica 58(2):165-170] notes that intraspecific communication is an important component of social behavior in many species. In urodeles, chemical signals found in scent marks or other glandular secretions are often the mechanism by which such communication occurs. The author tested the hypothesis that individuals of *Batrachoseps attenuatus*, the California slender salamander, can discriminate between self-marked substrates and substrates marked by conspecifics. After housing 30 salamanders for five days with moistened sphagnum moss, the author presented each individual in 15-min behavioral trials with two pieces of moss, one from its own housing chamber and the other from a conspecific's chamber. Individuals nose-tapped (chemodetection) significantly more often and spent significantly more time in the threat posture when in the vicinity of conspecific-marked substrates relative to self-marked substrates. This suggests that individuals of *B. attenuatus* discriminate between self-marked and conspecific-marked substrate, implying self-recognition, and that this discrimination may be effected by scent marks.

CURRENT CONCEPTS: BITES OF VENOMOUS SNAKES

B. S. Gold et al. [2002, New England Journal of Medicine 347(5):347-356] estimate that over the last three years in the United States there have been 7,000 to 8,000 venomous snakebites resulting in five to six deaths annually. Of these, 2,000 bites per year were reported to the American Association of Poison Control Centers. Deaths were most common in children, the elderly and persons who did not receive adequate amounts of antivenom. The typical victim was male aged 17–27. Even nonvenomous snakebite may cause terror, with symptoms of nausea, vomiting, diarrhea, fainting, rapid heart rate and cold, clammy skin. These symptoms must be differentiated from true envenomation. Also, one quarter of pit viper bites are "dry" with no venom injected.

In the field, the bitten patient should be kept calm and warm, far enough away from the snake to prevent further injury, and driven quickly to the nearest hospital. Jewelry and tight clothing near the bite should be removed. Traditional treatments including tourniquets, incision and suction, application of ice, electric shock, and administration of alcohol or other stimulants should be avoided. Paramedics should ensure an open airway and normal breathing, administer oxygen, start an intravenous line in an unaffected limb and transport the patient to a hospital. If a tourniquet has been applied it should be left in place until a physician evaluates it and initiates antivenom therapy, if indicated.

In the hospital, supportive care is maintained while a history is taken and physical examination is conducted. Several baseline measurements around the extremity above and below the bite are recorded to allow documentation of swelling as it progresses. Measurements are repeated every 15 to 20 minutes until swelling subsides. The upper margin of the swelling also is marked with the time at similar intervals to monitor progression and direct the use of antivenom. Complete blood count, clotting profile and serum biochemistries are monitored during treatment. Some serious signs of neurotoxic envenomation often are delayed, so victims of Mojave rattlesnake (*Crotalus scutulatus*) and coralsnake (*Micrurus* sp.) bites should be observed in an intensive care unit for eight and 12 hours, respectively, even if no symptoms exist.

The traditional Antivenin (Crotalidae) Polyvalent (ACP), Wyeth, is being discontinued. It is manufactured by immunizing horses with venom from fer-de-lance (*Bothrops atrox*), eastern diamond-backed (*Crotalus adamanteus*), western diamond-backed (*C. atrox*) and tropical rattlesnakes (*C. durissus terrificus*). Crotalidae Polyvalent Immune Fab (Ovine) (FabAV) is now available and averages 5.2 times as potent as ACP in animal testing. FabAV is produced by immunizing sheep with venom from cottonmouths (*Agkistrodon piscivorus*), eastern diamond-backed (*Crotalus adamanteus*), western diamond-backed (*C. atrox*) and Mojave rattlesnakes (*C. scutulatus*). Allergic reactions to antivenom therapy include skin rashes, immediate anaphylactic (allergic) reactions, delayed serum sickness reactions and even death. Serum sickness occurs one to three weeks after treatment with signs of fever, rash and swollen lymph nodes. Incidence of acute allergic reactions and delayed serum sickness, respectively, were reported as 23 to 56% and 18 to 86% for ACP, and only 14% and 16% for FabAV. [The current national shortage of both antivenoms was not mentioned in this article.]

It was observed during clinical trials that symptoms recurred after cessation of treatment with FabAV, so protocols now require that maintenance doses be given 6, 12 and 18 hours after initial control. Most bite cases required 8 to 12 vials of FabAV to attain initial control, but one case needed 22 vials.

Compartment syndrome is a condition in which swelling within a muscle compartment causes pressure above 30 mm Hg and results in loss of circulation and tissue death. True compartment syndrome is treated by fasciotomy, which is an incision down the entire length of the affected muscle to release the pressure. There is little evidence for the effectiveness of fasciotomy in snakebite cases. Its use is controversial because it fails to address the effects of the venom itself, the resulting clotting disorders and the need for antivenom. Fasciotomy often causes lengthy recovery, unsightly scars and loss of function. Nevertheless, it is considered routine in certain parts of the country. The authors suggest that suspected cases of compartment syndrome associated with snakebite be confirmed by actual measurement of pressure and treated with an additional four to six vials of FabAV over one hour. In snakebite, the death of muscle cells in compartment syndrome is thought to be caused by the effects of venom rather than increased pressure cutting off blood flow. Thus antivenom should neutralize venom and reduce compartment pressure. Fasciotomy may be necessary if compartment pressure fails to lower within four hours and circulation is impaired.

In all cases of venomous snakebite a regional or national poison control center (800-222-1222) should be consulted. "Snakebite is a complex medical emergency. . . . The dynamic and erratic course of the envenomation syndrome requires close monitoring of the patient and careful clinical decision making. Consultation with a physician who is experienced in the diagnosis and treatment of bites of venomous snakes is essential."

MALE PARENTING OF NEW GUINEA FROGLETS

D. Bickford [2002, Nature 418:601-602] reports a new method of parental care in frogs: transport of froglets by the male parent. This behavior was observed in two species of New Guinea microhylids, *Liophryne schlaginhaufeni* and *Sphenophryne cornuta*. Twenty-three froglet-transfer events were observed: 9 in *S. cornuta* and 14 in *L. schlaginhaufeni*. In all 19 cases for which the sex of the transporting individual was ascertained, the froglets were transported by the male. As the offspring jump off at different points, they may benefit from reduced competition for food, lower predation pressure, and fewer opportunities for inbreeding between froglets.

COMMUNICATION BY FECAL CHEMOSIGNALS

J. S. F. Lee and B. Waldman [2002, Copeia (3):679-686] note that communication by acoustic signals has been extensively studied in anurans, but other sensory modalities have been largely ignored. The authors' experiments demonstrate that the frog *Leiopelma hamiltoni* communicates through fecal chemosignals. When given a choice between their own and other individuals' feces, subjects spent more time near their own feces. This effect was greatest when the conspecific was larger in body size, suggesting that information about size as well as individuality is communicated. Time spent near conspecific feces correlated negatively with the distance between the collection sites of the frogs. This correlation may reflect differential responses to the feces of frogs of varied levels of kinship and social familiarity: frogs may avoid nonrelatives and unfamiliar conspecifics. To test the hypothesis that frogs alter fecal production upon exposure to conspecific feces, the authors presented subjects with either one smear of their own and one smear of a conspecific's feces or two smears of their own feces. Frogs did not defecate more when exposed to conspecific feces. However, when the frogs did defecate, they placed their feces closer to the conspecific's feces than to their own. This supports the hypothesis that feces serve as signals to conspecifics. Visual and tactile cues were eliminated in the experiments. The results show that *L. hamiltoni* communicates with conspecifics through chemical signals. The authors suggest that chemical signaling may be widespread in anurans.

INTERACTIONS AMONG SALAMANDER LARVAE

R. Brodman and J. Jaskula [2002, Herpetologica 58(3):346-354] evaluated five species of *Ambystoma* in the laboratory to quantify the effect of other larvae on microhabitat use and activity. They studied microhabitat use by partitioning containers into microhabitats that either contained or lacked refuges and recorded movement to determine activity. All five species altered microhabitat preferences and activity levels when they shared tanks with larvae of most species. The smallest species (*A. laterale* and *A. maculatum*) spent the most time in the vegetated chamber and used it more often, and decreased activity in the presence of potential predators. When species were paired, both species usually changed their activity and use of microhabitat in opposite directions. These behaviors may be important in maintaining coexistence among species by reducing interspecific aggression and intraguild predation.

DIAMONDBACK TERRAPIN ECOLOGY

J. W. Gibbons et al. [2001, Chelonian Conservation and Biology 4(1):66-74] used mark–recapture data from 1274 original captures and 1131 recaptures during a 16-year population study of diamondback terrapins (*Malaclemys terrapin*) in a South Carolina salt marsh to examine demography and ecological factors critical for management recommendations and conservation. Adult females were significantly larger but less numerous than adult males. Most of the terrapins captured in the tidal creeks were sexually mature, first- and second-year individuals being absent and third- and fourth-year individuals being scarce, suggesting the use of a different habitat by juveniles. Most individuals exhibited high site fidelity, remaining in the same creek from year to year, although similar creeks were nearby. The observation that individuals rarely moved between adjacent tidal creeks and remained in one small area as adults is of particular significance to management considerations for the species. Terrapin numbers in one creek were high during the 1980s and declined steadily after 1990, with only a single individual being present after 1993. The combination of high site fidelity and limited dispersal by terrapins from other creeks and the onset of recreational crab trapping and other human activities are presumed to have been responsible for the disappearance of the population. Without the implementation of strong measures to assure sustainability of terrapin populations throughout the range, continued population declines are likely.

A NEW SALAMANDER FROM LAOS

B. L. Stuart and T. J. Papenfuss [2002, J. Herpetology 36(2): 145-148] describe *Paramesotriton laoensis* from northern Laos. This represents the first record of Caudata from the country. The species is placed in the genus *Paramesotriton* based on osteological characters. It differs from all other members of the genus in dorsal color pattern and reduced tongue development.

SOUTHEASTERN NIGERIA SNAKE FAUNA

E. A. Eniang et al. [2002, Herpetozoa 15(1/2):79-82] studied the composition of the snake fauna of a savanna-forest transition zone in a hilly region of southeastern Nigeria (Okwangwo Division, Cross River National Park; elevation 300 to 1800 m). The diversity proved high, with 27 species recorded (3 Pythonidae, 12 Colubridae, 3 Elapidae, 1 Atractaspididae, 6 Viperidae and 2 Typhlopidae). The most common species was likely *Causus maculatus*, followed by *Gastropyxis smaragdina*, *Naja nigricollis*, *Bitis arietans* and *B. gabonica*. Deserving mention is the sympatric occurrence of three species of *Bitis* [i.e., the forest-linked species *B. gabonica* and *B. nasicornis*, and the savanna-dwelling *B. arietans*], which were captured at the Butatong Botanical Garden. Although the presence of *B. arietans* is proof that the study area is suitable for both savanna and forest snake species, the authors stress that (1) the great majority of the species observed were typical forest-dwellers, and that (2) the composition of the Okwangwo snake community is relatively similar to that of typical lowland rainforest areas in southern Nigeria.

Advertisements

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

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For sale: herp books. *The Amphibians and Reptiles of Botswana* by R. D. Auerbach, 1987, 295 pp., large format, 19 plates of color photos plus b&w photos, contains info on diet, habits, and habitat, spine torn at top, covers somewhat worn, contents excellent, softbound, seldom offered, $92; *A Field Guide to the Reptiles of the Australian High Country* by R. Jenkins and R. Bartell, 1980, 278 pp., many color photos, DJ, hardbound, excellent natural history information, including many skinks and some geckos, $28; *The Snakes of Australia* by J. R. Kinghorn, 1964 revised edition (1954), 197 pp., numerous color drawings, DJ, hardbound, $32; *The Fauna of British India, Reptilia and Amphibia, Vol III - Serpentes*, 1961 reprint (1943), 583 pp., 166 figs., map, hardbound, $100; *The Snakes of Ecuador, A Checklist and Key* by James A. Peters, 1960, pp. 491-541, softbound, $20; *Amphibians and Reptiles of the Carolinas and Virginia*, 1980, 264 pp., 196 color photos, hardbound, $35; *The Reptiles & Amphibians of Alabama* by Robert Mount, 1975, 345 pp., 350 figs. (b&w photos and range maps), softbound, $22. All books in excellent condition except as noted. Prices postpaid for orders of $25 or more; $2.50 postage and handling for orders under $25. William R. Turner, 6014 Blue Ridge Drive, Apt. A; Highlands Ranch, CO 80130, (720) 344-6197, E-mail: turnerbmrk@prodigy.net.

For sale: **Pillstrom Snake Tongs** are available from the manufacturer and are shipped worldwide. Lengths/prices: 26"/$58, 36"/$59, 40"/$60, 46"/$61, 50"/$62. Shipping and handling costs in the U.S.: $8 for the first tong, $1 for each additional. Pillstrom Tongs, 4617 Free Ferry Road, Fort Smith AR 72903-2363, (479) 452-3001 phone, (479) 452-3671 fax. E-mail: pillstromt@aol.com. Website <members.aol.com/mpillstrom>.

For sale: Complete set of the *Vivarium* magazine (Vol. 1, No. 1, to Vol. 11, No. 1). Excellent condition, $1,000 or best offer. Eli, (785) 393-3583, or E-mail: elig@ku.edu. [KS]

For sale: 1 male flying gecko, *Ptychozoon kuhlii*, proven breeder, with custom enclosure and all applicable enclosure furnishings; 2-3 male crested geckos, *Rhacodactylus ciliatus*, subadult/adult, strong markings, great bloodlines, with enclosures and all applicable enclosure furnishings; 1 "Rainmaker" misting system with pump, nozzles, tubing, etc.; 1 "Hovabator" incubator. Various other herp-related items also available. All reasonably priced. Please E-mail: kimberlynejdl@yahoo.com for information and discuss. Hate to part with them, but have no choice. Fecals are clean and all are healthy. All *Rhacodactylus ciliatus* have been handled on a semi-regular basis.

For sale: crested geckos (*Rhacodactylus ciliatus*), unsexed one to 8 months old, $30 and up; year-old males, $40 each or 3/$100 (if available). Also, leopard geckos and red albino corn snakes available soon. Will ship lizards USPS (buyer pays postage). John Cebula, (630) 858-3767, or E-mail: johncebula@aol.com.

For sale: corn snakes, $15. Cute little serpents. Well started. Eating pinks. Most partial zigzag, all het for amelanism. Can deliver to monthly CHS meeting or to Lee Watson Swap or other. Call days (773) 478-7077 or E-mail: david@labrosseltd.com.

For sale: '02 c.b. hatchling snakes, $35 each: Yunnan beauty (*Elaphe taeniura yunnanensis*), Sinaloan milk, Stuart's milk, Leonis king, Huachuca mountain king. Henry Cohen, 24 St. Johns Place, Buffalo NY 14201, (716) 881-6724 (mornings only).

For sale: Rat snakes. Cunningham's *Elaphe*—Specializing in rare *Elaphe*. Working with *E. dione*, *E. ridleyi*, *E. climacophora*, corns, and many more. Rick, (309) 353-9661. E-mail: rick1@ntslink.net. Web site: http://www.cunninghamselaphe.com.

For sale: Green anacondas, c.b. 9/01, beautiful, healthy and DOCILE, $175 each; yellow anacondas, c.b. 6/01, flawless little screamers, $95 each; Amazon tree boas, c.b. 7/01, solid yellow, $125, orange and green, $150, both are female; 11' female tiger retic, stunning specimen, tame and a great feeder, $550 or best offer; jungle carpet pythons from nice black and yellow parents, $100 each or $175/pair. Mark Petros, Strictly Serpents, (847) 836-9426, E-mail: MLPserpent@hotmail.com.

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Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Line ads in this publication are run free for CHS members—$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: <MADadder0@aol.com>.

18TH ANNUAL MIDWEST HERPETOLOGICAL SYMPOSIUM, OCTOBER 11–13, PEORIA

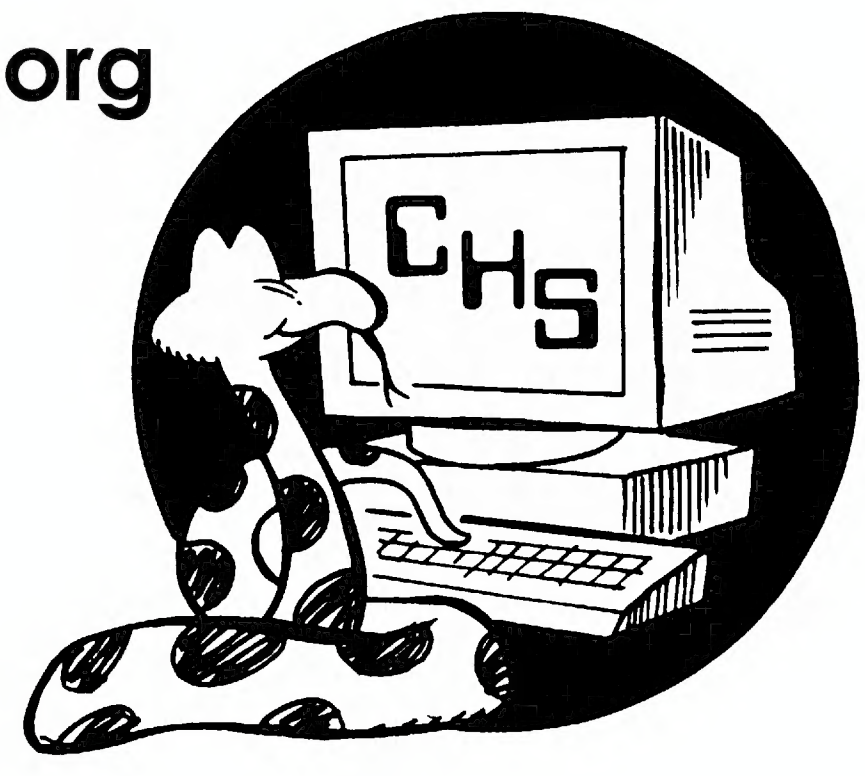
This year's Midwest Herpetological Symposium will be held October 11–13 in Peoria, Illinois, and will be co-hosted by the Central Illinois Herpetological Society and the Champaign Area Society of Herpetoculturists. Events will take place at the Holiday Inn Brandywine, 4400 N. Brandywine Drive, in Peoria. Friday night will feature an icebreaker social with a guest speaker. Saturday all day will see presentations by distinguished speakers on a variety of herpetological topics. The Saturday evening banquet will also include a featured speaker and the customary benefit auction. Sunday will be devoted to a captive-bred animal sale (open to the public). Also planned is an optional Monday field trip to southern Illinois. The scheduled speakers and their topics are: Richard Bartlett, "Herp Tales from the Amazon"; Dr. Peter C. H. Pritchard, "The World's Tortoises: An Overview"; Dr. Val Beasley, "Damaged Ecosystems and the Problems of Frogs"; Ed Pirog, "Field Herping –Canary Islands Sauria"; Patrick Nabors, "*Dendrobates pumilio*: Care and Breeding in Captivity"; Dr. Terry Farrell, "The Behavioral Ecology of the Pigmy Rattlesnake in Florida"; Scott Ballard, "Southern Illinois Herpetofauna –La Rue Pine Hills and Otter Pond"; and John Murphy, "Rainbows in the Mud: A Look at Australasian Rear-fanged Water Snakes." For registration information, contact the symposium co-chairs: Ray Austin, (309) 682-4672, raustin@co.peoria.il.us; Mike Pingleton, (217) 356-2385, pingleto@ncsa.uiuc.edu; or visit the symposium's web site <www.midwestsymposium.org>.

MORE GREAT HERP SEARCHES

This past spring, Chicago Wilderness sponsored a series of **Great Herp Searches** at forest preserves throughout the Chicago region. These searches helped to collect information for land managers who wanted to know what was crawling around at their sites but hadn't the time or the bodies to find out. These outings were highly successful and another series will take place this fall. As of this writing, two have been definitely scheduled: Grant Woods in northwest Lake County, Saturday, September 28, noon – 3 P.M.; and Ethel Woods in northern Lake County, Saturday, October 12, noon – 3 P.M. Searches will probably take place in Kane and Will Counties as well. For more information or to sign up for these searches, call Karen Glennemeier at (847) 965-1150.

Next time you surf the WorldWide Web, crawl, run, slither, slide, jump, or hop over to the CHS web site!

www.chicagoherp.org



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- **Much, much more!**

Chicagoherp.org is accepting applications for banner advertisements or links from herpetoculturists and manufacturers of herp-related products. Visit the site and contact the webmaster for details on how you can sponsor CHS!

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, September 25, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. **Pete Taylor**, head keeper at the St. Louis Zoo, will speak about Cuvier's dwarf caiman, *Paleosuchus palpebrosus*. Pete will discuss what they've learned from their captive specimens in St. Louis about the behavior of this fascinating little crocodilian, which he refers to as "the matchbox croc."

At the October 30 meeting, **Charles Painter**, of the New Mexico Fish and Game Department, will speak on "Rattlesnake Roundups: Are They as Bad as You Think—Or Worse?"

The regular monthly meetings of the Chicago Herpetological Society now take place at Chicago's newest museum—the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the October 18 board meeting, to be held at the North Park Village Administration Building, 5801 North Pulaski Road, Chicago. To get there take the Edens Expressway, I-94, and exit at Peterson eastbound. Go a mile east to Pulaski, turn right and go south to the first traffic light. Turn left at the light into the North Park Village complex. At the entrance is a stop sign and a guardhouse. When you come to a second stop sign, the administration building is the large building ahead and to your left. There is a free parking lot behind the building.

The Chicago Turtle Club

The next meeting of the Chicago Turtle Club will be on Sunday, September 29, 1:00 – 3:30 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. This will be the annual fall turtle show. Meetings are informal; questions, children and animals are welcome. Parking is free. For more info call Lisa Koester, (773) 508-0034, or visit the CTC website: http://www.geocities.com/~chicagoturtle.

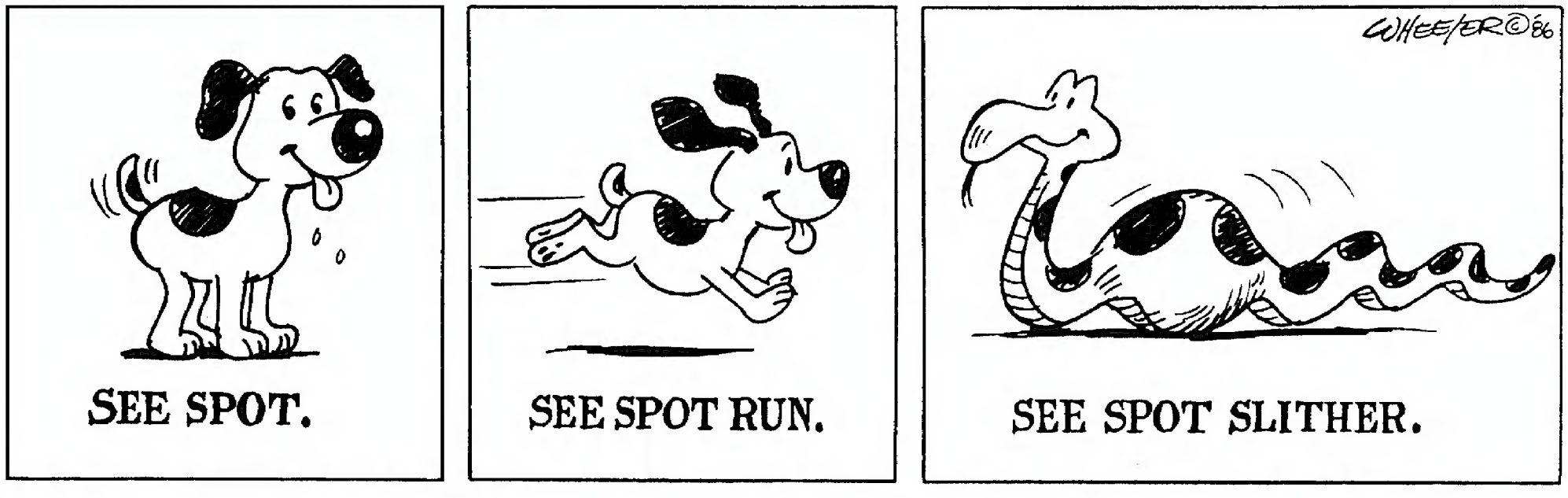
HERP OF THE MONTH

Each monthly meeting will showcase a different herp. CHS members are urged to bring one specimen of the "Herp of the Month" to be judged against the entries from other CHS members. Prizes will be awarded to the top three winners. For September, members are invited to bring **any natricine snake.** The natricines are a subfamily of the colubrids; North American members of this subfamily most likely to be kept as captives include the water snakes (genus *Nerodia*), the garter and ribbon snakes (genus *Thamnophis*), and the brown and red-bellied snakes (genus *Storeria*). October's category will be **tortoises**.

NEW MAILING ADDRESS FOR THE CHS

The mailing address of the Chicago Herpetological Society is now **2430 N. Cannon Drive, Chicago IL 60614**. Mail to the old address will be forwarded to us for the next few months, but please make note of the new address.

THE ADVENTURES OF SPOT



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